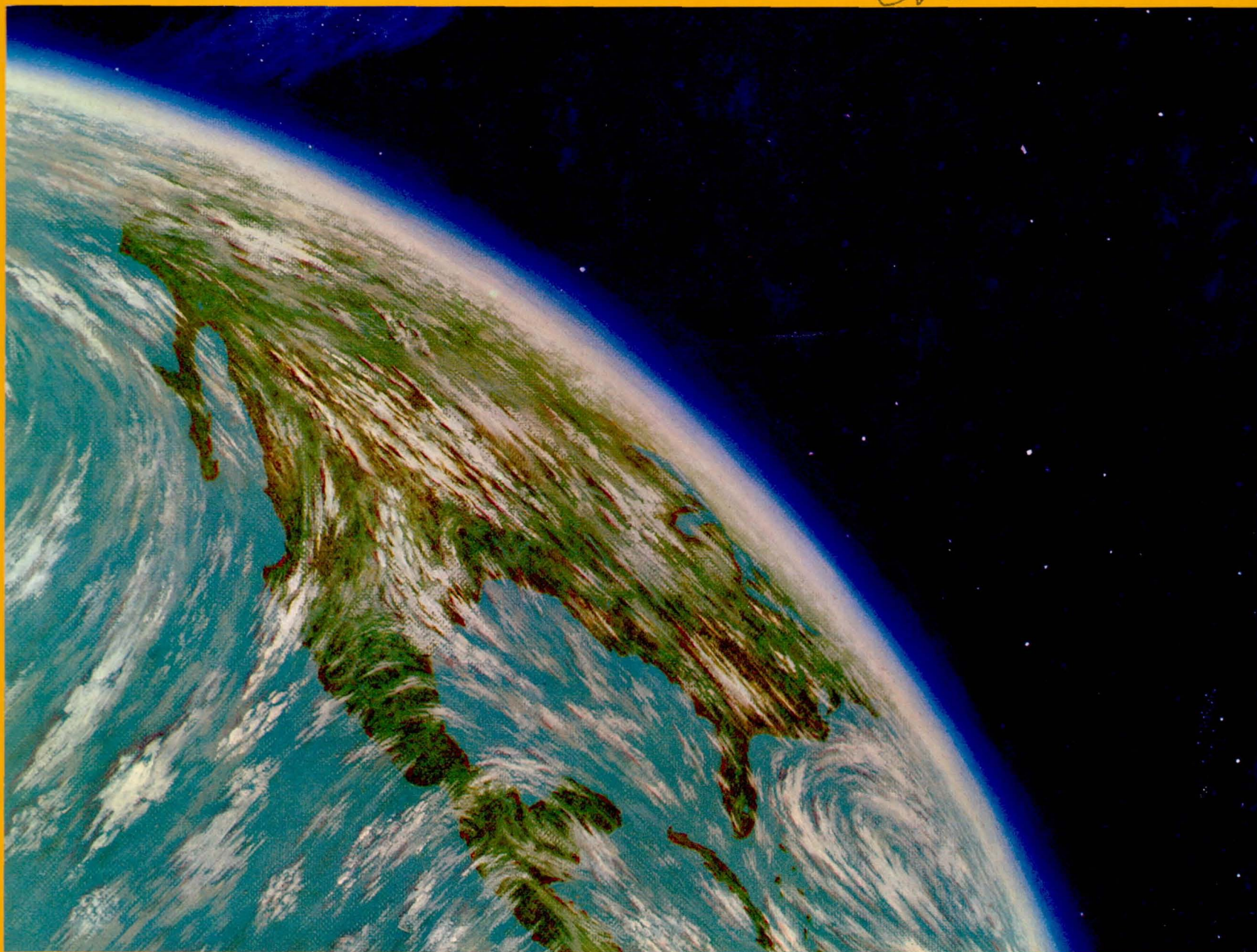


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# U. S. STANDARD ATMOSPHERE, 1962

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- ICAO STANDARD ATMOSPHERE  
TO 20 KM
- PROPOSED EXTENSION TO 32 KM
- TABLES AND DATA TO 700 KM

December 1962  
Washington, D.C.



N63-13176

# U.S. STANDARD ATMOSPHERE, 1962

ICAO STANDARD ATMOSPHERE TO 20 KILOMETERS  
PROPOSED ICAO EXTENSION TO 32 KILOMETERS  
TABLES AND DATA TO 700 KILOMETERS

Prepared under sponsorship of  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
UNITED STATES AIR FORCE  
UNITED STATES WEATHER BUREAU

U.S. STANDARD ATMOSPHERE, 1962



### **To Harry Wexler**

Dr. Harry Wexler, cochairman of the United States Committee on Extension to the Standard Atmosphere and Director of Meteorological Research for the United States Weather Bureau, died on August 11, 1962. Over a period of nearly fifteen years Dr. Wexler led the development and formulation of the United States Standard Atmosphere. This work is respectfully dedicated to him.

## Abstract

*The U.S. Standard Atmosphere, 1962 is a product of COESA generated under the impetus of increased knowledge of the higher atmosphere and more accurate determinations of basic quantities, such as redefinition of the absolute thermodynamic temperature scale. For all practical purposes the U.S. Standard Atmosphere, 1962 is in agreement with the ICAO Standard over their common altitude range. Background information, including a brief historical statement, is given in the Foreword. The document is arranged in three parts. Part I gives the basis for the main tables of atmospheric properties and contains a full development of gravity and geopotential as well as the basic assumptions, formulas, and derived quantities. In Part II additional information relating to the atmosphere is given, including discussion of systematic variations, observed and inferred extremes, and representations of atmospheric variables as approximate analytic functions of altitude. Part III contains the main tables of atmospheric properties to 700 kilometers calculated in both metric and English units. Throughout the document figures and short tables are introduced to aid in visualizing the variation with altitude of atmospheric parameters and to provide conversions between various units.*



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## List of Symbols and Abbreviations

$a$	radius of the earth at the equator
$a_p$	geomagnetic index
BTU	British thermal unit
$b$	subscript indicating base or reference level; also semiminor axis, or polar radius
$^{\circ}\text{C}$	degrees, in thermodynamic Celsius scale
$C_i$	international magnetic character figure
$C_s$	speed of sound
cal	calorie
cm	centimeter
$^{\circ}\text{F}$	degrees, in thermodynamic Fahrenheit scale
$F_{10}$	decimetric solar flux
$f$	ellipsoid flattening
ft	foot
$G$	Newton's universal gravitational constant
$g$	acceleration due to gravity
$\mathbf{g}$	gravity force, per unit mass
gm	gram
$H$	geopotential altitude
$H_p$	pressure scale height
$H_\rho$	density scale height
$h$	$H - H_0$
$i$	subscript indicating ice-point value
in.	inch
i.n. mi	international nautical mile
$J$	second zonal harmonic coefficient
$^{\circ}\text{K}$	degrees, in thermodynamic Kelvin scale
$K_p$	3-hour range index
$k$	thermal conductivity
kg	kilogram (mass)
kg-cal	kilogram-calorie
kgf	kilogram (force)
kg-mol	kilogram-mole
km	kilometer
kw-hr	kilowatt hour
$L$	mean free path
$L_M$	molecular-scale temperature geometric gradient, $\frac{dT_M}{dZ}$
$L'_M$	molecular-scale temperature geopotential gradient, $\frac{dT_M}{dH}$
lb	pound (mass)
lb-mol	pound-mole (mass)
lbf	pound (force)
$M$	mean molecular weight of air
$\overline{M}$	mass of the earth
m	meter
mb	millibar
mks	meter-kilogram-second system of units
mm	millimeter
$N$	Avogadro's number

$n$	number density; also exponent
0	subscript indicating sea-level value
$P$	pressure
pdl	poundal
$^{\circ}\text{R}$	degrees, in thermodynamic Rankine scale
$\mathbf{R}$	position vector
$R^*$	universal gas constant
$r$	radial distance
$S$	Sutherland's constant
sec	second
$T$	temperature in absolute thermodynamic scales
$T_D$	maximum daytime temperature
$T_i$	ice-point temperature in absolute thermodynamic scales
$T_M$	molecular-scale temperature in absolute thermodynamic scales
$T_N$	minimum nighttime temperature
$t$	temperature in nonabsolute thermodynamic scales; also, day of year
$t_i$	ice-point temperature in nonabsolute thermodynamic scales
$u$	universal measure of magnetic activity
$\bar{V}$	particle speed (arithmetic average)
$v$	mole volume of air under existing conditions of $T$ and $P$
$Z$	altitude in geometric measure
$\beta$	constant used in Sutherland's viscosity equation
$\gamma$	ratio of specific heats
$\eta$	kinematic viscosity
$\theta$	longitude
$\mu$	coefficient of viscosity
$\nu$	collision frequency
$\rho$	mass density
$\sigma$	effective collision diameter of a mean air molecule
$\Phi$	geopotential
$\Phi_C$	centrifugal potential
$\Phi_G$	potential energy of the gravitational attraction
$\phi$	geographic latitude
$\psi$	geocentric latitude
$\psi'$	angular distance from center of diurnal bulge
$\Omega$	angular velocity of the earth
$\omega$	specific weight



## Foreword

On March 15, 1962, a revised U.S. Standard Atmosphere to 700 km was adopted by the United States Committee on Extension to the Standard Atmosphere (COESA), representing 29 U.S. scientific and engineering organizations. This committee has also recommended the lower 32 km of this representation of the atmosphere to the International Civil Aviation Organization (ICAO) for international standardization. The lowest 20 km of this new COESA atmosphere coincides with the 20 km *Manual of the ICAO Standard Atmosphere*, 1954, except for minor differences due to revised standardization of some physical constants.

This report revises and replaces COESA's first report, *U.S. Extension to the ICAO Standard Atmosphere—Tables and Data to 300 Standard Geopotential Kilometers*, 1958 (ref. 1).

The U.S. Air Force, the National Aeronautics and Space Administration, and the U.S. Weather Bureau cosponsored the movement which led to this new representation of the atmosphere. Participating organizations included:

Aeronautical Systems Division, AFSC  
Air Force Deputy Commander Aerospace Systems, AFSC  
Air Weather Service, USAF  
Applied Physics Laboratory, The Johns Hopkins University  
Army Ballistic Missile Agency  
Army Signal Research and Development Laboratory  
Ballistic Research Laboratories (Aberdeen Proving Ground)  
Battelle Memorial Institute  
The Boeing Company  
Federal Aviation Agency  
General Dynamics/Astronautics  
Geophysics Corporation of America  
Geophysics Research Directorate, AFCRL  
Goddard Space Flight Center, NASA  
Harvard College and Smithsonian Institution Astrophysical Observatories  
High Altitude Engineering Laboratory, University of Michigan  
Jet Propulsion Laboratory, California Institute of Technology  
Langley Research Center, NASA  
Lockheed Missiles and Space Company  
George C. Marshall Space Flight Center, NASA  
NASA Headquarters  
National Bureau of Standards, Department of Commerce  
Naval Proving Grounds  
Naval Research Laboratory  
Navy Weather Research Facility  
The Rand Corporation  
Space Technology Laboratories, Inc.  
United States Weather Bureau, Department of Commerce  
White Sands Missile Range

COESA is a group of scientific and engineering organizations, each holding national responsibilities related to the requirement for accurate tables of the atmosphere to high altitudes. After they joined forces to develop such an atmosphere in November 1953, several new organizations were added to the ranks. A working group, appointed at the first meeting, met frequently between 1953 and the end of 1956. Their recommendations, which were accepted by the entire committee, were published in 1958 (ref. 1).

Scientific progress quickly rendered this 1958 document obsolete, since orbital periods of the first Sputnik indicated that densities at the upper altitudes were in error by more than an order



of magnitude. The Working Group was reestablished in January 1960 to review all available satellite and rocket data as related to the COESA tables and to consider the need for revision. For the next year, the Working Group studied new data and theories from more refined satellite flights. The information obtained from the early USSR satellites was insufficient for the purpose because the USSR aerodynamic configurations were not made known and the data covered only the lower altitude range of satellite orbits. A few years of observations at satellite altitudes were also required to understand the effects of solar activity and position. The United States satellites provided the necessary extreme-altitude data. Additional rocket flights provided needed detail for levels above those of balloon flights. The COESA Working Group prepared a recommendation from this new scientific inventory which was accepted by the entire committee. Active Working Group participants included:

\*Dr. Luigi Jacchia, Smithsonian Institution Astrophysical Observatory, Chairman

Mr. Norman Sissenwine, AFCRL, Executive Secretary

Mr. Herbert Appleman, Air Weather Service

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Mr. Maurice Dubin, NASA

Lt. Col. J. C. Glover, Air Weather Service

Mr. R. K. Hankey, ASD, Wright-Patterson AFB

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Dr. Harry Wexler, U.S. Weather Bureau

This revised *U.S. Standard Atmosphere, 1962* depicts idealized middle-latitude year-round mean conditions for the range of solar activity that occurs between sunspot minimum and sunspot maximum. Part I gives the basis for the tables appearing in Part III. Supplemental presentations provided in Part II indicate the variability of density above 200 km with solar position and activity. For lower altitudes they indicate the range of seasonal and day-to-day variability that can be deduced from the available data.

Although density is the primary atmospheric property measured at or deduced for very high altitudes, it is necessary to define the atmosphere in terms of temperature, in order to achieve continuity between the ICAO atmosphere and its extension. The application of molecular-scale temperature segments at higher altitudes yields densities which are consistent with observed densities. Table I.4(a) is the basic framework for the tables of the *U.S. Standard Atmosphere, 1962*.

The new *U.S. Standard Atmosphere, 1962* agrees in general with but differs in detail from the Committee on Space Research (COSPAR) International Reference Atmosphere, CIRA 1961. CIRA 1961 is not in agreement with the ICAO Standard Atmosphere. The *U.S. Standard Atmosphere, 1962* provides detail and more parameters than CIRA 1961, and includes refinements in matching the data that were not possible in the earlier COSPAR atmosphere.

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\*Contributor to Part II.

†Editor.

Close contact between COSPAR and COESA has reduced discrepancies between the two atmospheres to a minimum.

On the basis of information provided by the COESA Working Group, this document was prepared by personnel of the NASA Langley Research Center, notably: Dr. John E. Duberg, Mr. William J. O'Sullivan, Jr., Mr. Richard A. Hord, Dr. S. L. Seaton, and Mr. James A. Mullins, who wrote and revised the manuscript; Miss Vera Huckel and Miss Jean Mason, who did the checking and curve-fitting; and Mr. Roger Butler and Miss Lillian Boney, who wrote the machine programs for computation of the tables.

The cochairmen would like to take this opportunity to thank the many Working Group scientists and engineers who contributed unselfishly of their time and energies to bring this new representation of the atmosphere into being. Our special thanks and that of all organizations of the committee go to the individuals who prepared and edited this report.

MAURICE DUBIN, NASA  
NORMAN SISSENWINE, USAF  
HARRY WEXLER, USWB

*Cochairmen, U.S. Committee on Extension to the Standard Atmosphere*

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PART I

Basis of the Tables



## PART I

# Basis of the Tables

### 1.0 INTRODUCTION

Part I gives the basis for computation of the main tables of atmospheric properties that appear in Part III. Also included in Part I are short tables of physical constants, conversion factors, and defining properties used in the computations.

### 1.1 BACKGROUND

The modern standard atmosphere was first developed in the 1920's in the United States and in Europe to satisfy a need for standardization of aircraft instruments and aircraft performance. The United States standard atmosphere was generated by the National Advisory Committee for Aeronautics (NACA) while the European standard atmosphere was produced by the International Commission for Aerial Navigation (ICAN). There were slight differences between the independently developed ICAN and NACA atmospheres. These differences were reconciled and international uniformity was achieved through adoption by the International Civil Aviation Organization (ICAO), on November 7, 1952, of a new standard atmosphere. This new standard was officially accepted by NACA on November 20, 1952, and forms the basis for tables published in NACA Report 1235 (ref. 2). The computations for these tables were carried out by the United States. Parts of the tables were independently computed by the Italian government. Conversions from metric to English units were made in accordance with internationally adopted conversion factors. The tables extended over an altitude range from 5 km below to 20 km above mean sea level.

Shortly after this first international standard atmosphere was published, a need began to be apparent for extension of the tables to greater altitudes. The U.S. Committee on Extension to the Standard Atmosphere (COESA) was organized in 1953, and adopted in 1956 the *U.S. Extension to the ICAO Standard Atmosphere* (ref. 1) including tables, developed from theory, extending to an altitude of 300 geopotential kilometers.

At about this same time, reliable instrumentation of rockets and satellites made possible experimental determinations of important atmospheric properties to altitudes of the order of 1,000 kilometers. This

new information so added to the fund of knowledge that in January 1961 a new Working Group of COESA was convened for the purpose of developing a new standard atmosphere.

In order to obtain the best scope and in order to achieve the purpose in minimum time, task groups were formed to lay the foundation for this standard atmosphere. Membership of these task groups was as follows:

#### *Task Group I*—Surface to 90 km

Arnold Court (Convener)  
K. S. W. Champion  
Luigi Jacchia  
Raymond A. Minzner  
Harold B. Tolefson (Liaison)  
Lester M. Jones (Adviser)  
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#### *Task Group II*—90 km to 200 km

Herman E. LaGow (Convener)  
Nelson W. Spencer  
Raymond A. Minzner  
K. S. W. Champion  
Philip W. Mange  
Richard A. Hord (Liaison)

#### *Task Group III*—200 km to 700 km

H. K. Kallmann-Bijl (Convener)  
Luigi Jacchia  
F. S. Johnson  
K. S. W. Champion  
John E. Duberg (Liaison)

#### *Task Group IV*—90 km to 700 km

Herman E. LaGow (Convener)  
K. S. W. Champion  
F. S. Johnson  
H. K. Kallmann-Bijl  
Philip W. Mange  
Raymond A. Minzner

The purpose, then, of this *U.S. Standard Atmosphere, 1962* is to take account of increased knowledge and more accurate determinations of basic quantities, including the redefinition of the absolute thermodynamic temperature scale by the Tenth General Conference on Weights and Measures in 1954. For all practical purposes, the *U.S. Standard Atmosphere, 1962* is in agreement with the ICAO Standard Atmosphere over their common altitude range.



The *U.S. Standard Atmosphere, 1962* is divided into four altitude regions. The first, from  $-5$  to  $+20$  km (geopotential altitude), is designated *standard*. A second region, from  $20$  to  $32$  km (geopotential altitude), is designated *proposed standard*. Next, the region from  $32$  km (geopotential altitude) to  $90$  km (geometric altitude) is called *tentative*, and last, that portion from  $90$  to  $700$  km (geometric altitude) is termed *speculative*.

Expressions for the variation with altitude of the acceleration due to gravity have been reexamined by COESA and are discussed in section I.2.4.

In extending the U.S. Standard Atmosphere to  $700$  km, and in light of the designations attached to various height intervals (implying increasing uncertainty with increasing height), there is included a discussion of variability and extremes of data in order to give those using this standard an appreciation of such excursions from the standard as may be met in practice. Fundamentally, the *U.S. Standard Atmosphere, 1962* is defined in terms of an ideal air assumed to be devoid of moisture, water vapor, and dust, and obeying the perfect gas law. It is based upon accepted standard values of the sea-level air density, temperature, and pressure.

For most purposes, the adoption of a sequence of connected linear segments involving variations of molecular-scale temperature with altitude to represent standard conditions is satisfactory and is retained here. However, there is added, for those needing a smoothed change of molecular-scale temperature with altitude, a section dealing with approximate analytic expressions for the molecular-scale temperature and other variables.

The bulk of this volume is devoted to tabulated values of atmospheric properties. It is especially to be noted that up to  $90$  km entry is made to the tables in terms of *geopotential altitude on the left-hand pages*, while on *right-hand pages* entry is made in terms of *geometric altitude*. Above  $90$  km entry is made in geometric altitude only.

Metric tables appear first, followed by similar tables in English units. It is also to be noted that at the  $90$ -km level, tabular entry of certain quantities is terminated for technical reasons discussed in the text. In the following paragraphs basic concepts and formulas are developed first, followed by relationships between variables and then by derived quantities. Graphs illustrative of the functions appear in the body of the text near the equations in order to facilitate visualization of the behavior of the quantities. Units and conversion factors are arranged in convenient tables.

## I.2 BASIC ASSUMPTIONS AND FORMULAS

I.2.1 PRIMARY CONSTANTS.—For purposes of computation it is necessary to establish numerical values for various constants appropriate to the

earth's atmosphere. In some instances the best value of the constant is known to greater accuracy than needed in atmospheric tables, and thus, rounding to a suitable value is appropriate. Table I.2.1 gives numerical values adopted as exact for the computations contained herein.

Discussion of these tabular values is as follows:

$P_0$	Sea-level pressure is, by definition, $1.013250 \times 10^5$ newtons $m^{-2}$ . This corresponds to the pressure exerted by a column of mercury $0.760$ m high, having a density of $1.35951 \times 10^4$ $kg\ m^{-3}$ and subject to an acceleration due to gravity of $9.80665$ $m\ sec^{-2}$ .
$\rho_0, t_0$	Sea-level density and temperature, respectively, are those values published in the ICAO Standard Atmosphere.
$g_0$	The value for $g_0$ , sea-level acceleration due to gravity, was adopted by the ICAO for the ICAO Standard Atmosphere and is adopted here as the value at exactly $45^\circ$ geographic latitude.
$S, \beta$	Sutherland's constant $S$ and $\beta$ , also a constant, are used in Sutherland's viscosity equation. These constants are determined from empirical data on the viscosity of air (ref. 3) in accordance with Sutherland's equation, and in general engineering practice the values shown in table I.2.1 are used.
$T_i$	Temperature of the ice point is $273.15^\circ$ K. This value results from the decision in October 1954 by the Tenth General Conference on Weights and Measures, meeting in Paris, France, to redefine the temperature scale by selecting the triple point of water as the fundamental, fixed point and assigning it the temperature $273.16^\circ$ K ( $0.01^\circ$ C).
$\gamma$	The ratio of the specific heat of air at constant pressure to the specific heat of air at constant volume is adopted as $1.40$ (dimensionless).
$\sigma$	The mean collision diameter for air is assumed to be a constant for all altitudes (ref. 4).
$N$	Avogadro's number based on the scale $C^{12}=12.0000$ . (The International Union of Pure and Applied Chemistry, meeting in Montreal in 1961, adopted a new table of atomic weights based on the assignment of atomic weight $12.0000$ to the $C^{12}$ isotope.)
$R^*$	The value of $R^*$ adopted here is that given in reference 5 when the latter is corrected for the aforementioned change in the atomic-weight scale.



TABLE I.2.1.—ADOPTED PRIMARY CONSTANTS

Symbol	Metric units (mks)	English units (ft-lb-sec)
$P_0$	$1.013250 \times 10^5$ newtons $m^{-2}$	2116.22 lbf $ft^{-2}$
$\rho_0$	$1.2250$ kg $m^{-3}$	0.076474 lb $ft^{-3}$
$t_0$	15° C	59.0° F
$g_0$	$9.80665$ m $sec^{-2}$	32.1741 ft $sec^{-2}$
$S$	110.4° K	198.72° R
$T_i$	273.15° K	491.67° R
$\beta$	$1.458 \times 10^{-6}$ kg $sec^{-1} m^{-1} (^{\circ}K)^{-1/2}$	$7.3025 \times 10^{-7}$ lb $ft^{-1} sec^{-1} (^{\circ}R)^{-1/2}$
$\gamma$	1.40 (dimensionless)	1.40 (dimensionless)
$\sigma$	$3.65 \times 10^{-10}$ m	$1.1975 \times 10^{-9}$ ft
$N$	$6.02257 \times 10^{26}$ (kg-mol) $^{-1}$	$2.73179 \times 10^{26}$ (lb-mol) $^{-1}$
$R^*$	8.31432 joules $(^{\circ}K)^{-1} mol^{-1}$	$1545.31$ ft lb (lb-mol) $^{-1} (^{\circ}R)^{-1}$

Conversion factors between the English and mks systems, in accordance with an agreement reached by the directors of the standards laboratories of six English-speaking nations, effective July 1, 1959, are (from ref. 6):

$$1 \text{ ft} = 0.3048 \text{ meter (exact)}$$

$$1 \text{ lb} = 0.45359237 \text{ kg (exact)}$$

**I.2.2 THE PERFECT GAS LAW.**—The equation of state of a perfect gas (the perfect gas law) and the hydrostatic equation (see section I.2.3) are convenient starting points in the development of the expressions and relationships necessary to realization of tables of values descriptive of the earth's atmosphere.

The equation of state of a perfect gas is (from ref. 7):

$$\rho = \frac{MP}{R^*T} \quad \text{I.2.2-(1)}$$

wherein  $P$  is the atmospheric pressure,  $\rho$  is the air density,  $R^*$  is the universal gas constant, and  $T$  is the absolute temperature. It is to be noted that  $M$ , the mean molecular weight of air, is assumed to be constant up to an altitude of 90 km, while above this altitude  $M$  varies because of increasing dissociation and diffusive separation.

**I.2.3 THE HYDROSTATIC EQUATION.**—In adopting the hydrostatic equation it is assumed that the atmosphere is static with respect to the earth. The equation in appropriate form is:

$$dP = -\rho g dZ \quad \text{I.2.3-(1)}$$

The acceleration due to gravity  $g$  and the geometric altitude  $Z$  are discussed in detail in later sections of the document.

**I.2.4 GRAVITY.**—Viewed in the ordinary manner, from a frame of reference fixed in the earth, the atmosphere is subject to the force of gravity. The force of gravity is the resultant (vector sum) of two forces: (a) the gravitational attraction, in accordance with Newton's universal law of gravitation, and (b)

the centrifugal force, which results from the choice of an earthbound, rotating frame of reference.

The gravity field, being a conservative force field, can conveniently be derived from the gravity potential energy, per unit mass—that is, from the geopotential  $\Phi$ . This is given by

$$\Phi = \Phi_G + \Phi_C \quad \text{I.2.4-(1)}$$

where  $\Phi_G$  is the potential energy, per unit mass, of the gravitational attraction, and  $\Phi_C$  is the potential energy, per unit mass, associated with the centrifugal force. The gravity force, per unit mass, is

$$\mathbf{g} = -\nabla\Phi \quad \text{I.2.4-(2)}$$

where  $\nabla\Phi$  is the gradient (ascendant) of the geopotential. The acceleration due to gravity is denoted by  $g$  and is defined as the magnitude of  $\mathbf{g}$ ; that is,

$$g = |\mathbf{g}| = |\nabla\Phi| \quad \text{I.2.4-(3)}$$

The gravity field is conveniently represented by its equipotential (level) surfaces, on each of which the geopotential  $\Phi$  is constant, the surfaces being pierced orthogonally by curves called the lines of gravity force. At each point on a line of force, the tangent has the direction of the corresponding gravity force vector  $\mathbf{g}$ .

In this document the geometric altitude  $Z$  of a point is defined as the distance, measured along the line of force through the point, from the equipotential surface for which  $\Phi=0$  to the point in question, the surface for which  $\Phi=0$  corresponding closely to mean sea level. (The slight differences between geometric altitude as defined here and several straight-line distances, shown schematically in fig. I.2.4(a), are negligible, for most practical purposes, in the altitude range considered herein.) With this definition, the differential relation of the geometric altitude  $Z$  and the geopotential  $\Phi$  is

$$d\Phi = g dZ \quad \text{I.2.4-(4)}$$



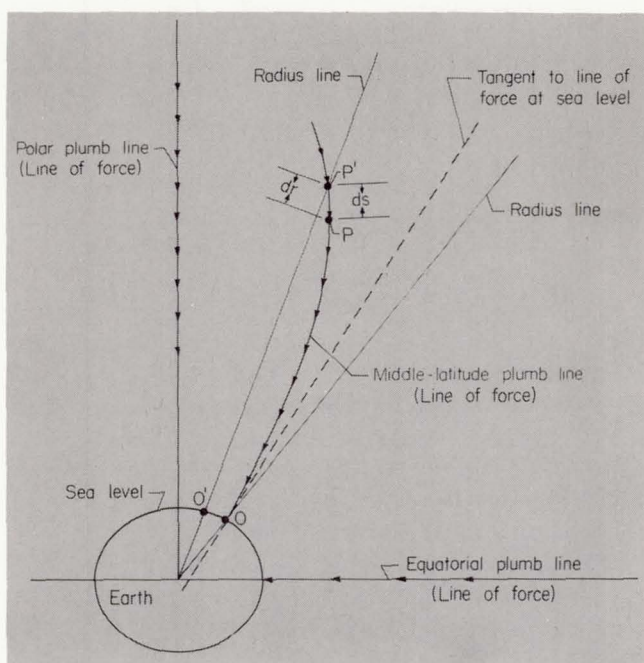


FIGURE I.2.4(a).—Relationships between various heights.

which is the incremental work done in lifting a unit mass a distance  $dZ$  against the gravity force. Therefore, the geopotential at a point whose altitude is  $Z$  is given by

$$\Phi = \int_0^Z g \, dZ \quad \text{I.2.4-(5)}$$

where the integration is performed along the line of force which passes through the point. (The general equation for the difference between the geopotential at points A and B is:

$$\Phi_B - \Phi_A = \int_A^B \mathbf{g} \cdot d\mathbf{R} \quad \text{I.2.4-(6)}$$

where the line integral on the right-hand side is independent of the path and  $\mathbf{R}$  is the position vector of a point on the path.)

The centrifugal potential  $\Phi_C$  can be expressed as

$$\Phi_C = \frac{1}{2} \Omega^2 [a^2 - (r \cos \psi)^2] \quad \text{I.2.4-(7)}$$

where  $\Omega$  is the angular velocity of the earth and  $r \cos \psi$  is the distance, measured perpendicularly to the earth's axis, from this axis to the point  $(r, \theta, \psi)$ . The spherical coordinates  $r$ ,  $\theta$ , and  $\psi$  are, respectively, the radial distance from the earth's center, the longitude, and the geocentric latitude (the angle that the radius vector makes with the equatorial plane of the earth). In equation I.2.4-(7), the constant  $a$  denotes the equatorial radius of the earth.

The gravitational potential  $\Phi_G$  can be expanded in an infinite series of spherical harmonics. When the less important terms in this series are discarded, the expression for  $\Phi_G$  becomes

$$\Phi_G = -\frac{GM}{r} \left[ 1 - \frac{J}{3} \left( \frac{a}{r} \right)^2 (3 \sin^2 \psi - 1) \right] + \frac{GM}{a} \left( 1 + \frac{J}{3} \right) \quad \text{I.2.4-(8)}$$

where  $G$  is Newton's universal gravitational constant,  $M$  is the mass of the earth, and  $J$  is the second harmonic coefficient.

Equations I.2.4-(1), -(2), -(3), -(7), and -(8) define the gravity field of the earth for the purposes of this document. The adopted geopotential  $\Phi$  is independent of the longitude  $\theta$ . Therefore, the defined gravity field is axially symmetric. Moreover, each line of force lies entirely in a meridian half-plane,  $\theta = \text{Constant}$ , and has the differential equation

$$r \frac{d\psi}{dr} = \frac{\frac{1}{r} \frac{\partial \Phi}{\partial \psi}}{\frac{\partial \Phi}{\partial r}} \quad \text{I.2.4-(9)}$$

The gravity line of force passing through the point for which  $\Phi = 0$  and  $g = g_0$  is the curve along which the present standard atmosphere is postulated. It is possible to select the value of the constant  $GM$  (see eq. I.2.4-(8)) well within the present limits of measurement and in such a way that the point for which  $\Phi = 0$  and  $g = g_0$  corresponds precisely to the geographic latitude  $\phi = 45^\circ$  (geocentric latitude  $\psi = 44.808^\circ$ ); this has been done with the use of selected average values for  $J$  and  $a$  (see ref. 8):

$$J = 1.623495 \times 10^{-3} \text{ (dimensionless)} \quad \text{I.2.4-(10)}$$

$$a = 6,378,178 \text{ meters} \quad \text{I.2.4-(11)}$$

The corresponding value of  $GM$  is

$$GM = 3.9862216 \times 10^{14} \text{ meters}^3 \text{ sec}^{-2} \quad \text{I.2.4-(12)}$$

For the accuracy required in this document, it suffices to treat the surface  $\Phi = 0$  as an ellipsoid whose flattening (ellipticity) is

$$f = 1 - \frac{b}{a} = \frac{1}{298.32} \quad \text{I.2.4-(13)}$$

where  $b$  is the semiminor axis, or polar radius. It should be noted that this value of the flattening is the average value given in reference 8. In terms of  $a$  and  $b$ , the values  $r_0$  and  $\psi_0$  which correspond to sea level and  $\phi = 45^\circ$  are found from the analytic geometry of the ellipse to be:

$$r_0^2 = \frac{a^4 + b^4}{a^2 + b^2} \quad \text{I.2.4-(14)}$$

$$\tan \psi_0 = \frac{b^2}{a^2} \quad \text{I.2.4-(15)}$$



Approximations, sufficiently accurate for the computations required herein, are developed in the following paragraphs for the equations of the line of gravity force and the acceleration due to gravity (see ref. 9).

Since the geopotential as approximated here is independent of the longitude angle  $\theta$ , the binomial series can be used to write the following expanded form of equation I.2.4-(3):

$$g = |\nabla\Phi| = \sqrt{\left(\frac{\partial\Phi}{\partial r}\right)^2 + \left(\frac{1}{r} \frac{\partial\Phi}{\partial\psi}\right)^2} \\ = \frac{\partial\Phi}{\partial r} \left[ 1 + \frac{1}{2} \left( \frac{1}{r} \frac{\partial\Phi/\partial\psi}{\partial\Phi/\partial r} \right)^2 + \dots \right] \quad \text{I.2.4-(16)}$$

It is sufficiently accurate to retain only the first two terms in the series in brackets and replace  $(\partial\Phi/\partial r)^2$  in the denominator of the second term by  $(GM/a^2)^2$ . The resulting approximate form for equation I.2.4-(16) is

$$g = \left\{ \frac{GM}{r^2} \left[ 1 - J \left( \frac{a}{r} \right)^2 (3 \sin^2 \psi - 1) \right] - r \Omega^2 \cos^2 \psi \right\} \left[ 1 + \frac{1}{2} \frac{1}{r^2} \left( \frac{a^2}{GM} \right)^2 \left( \frac{2GMJa^2}{r^3} + \Omega^2 r^2 \right) (\sin \psi \cos \psi)^2 \right] \quad \text{I.2.4-(17)}$$

Simultaneous numerical integrations of equation I.2.4-(9) and the equation

$$dZ = \sqrt{(dr)^2 + (r d\psi)^2} \quad \text{I.2.4-(18)}$$

have revealed that the following linear approximations are adequate for present purposes:

$$\psi = \psi_0 + \left( \frac{d\psi}{dr} \right)_0 (r - r_0) \quad \text{I.2.4-(19)}$$

$$r = r_0 + \frac{Z}{\left( \frac{dZ}{dr} \right)_0} = r_0 + \frac{Z}{\sqrt{1 + r_0^2 \left( \frac{d\psi}{dr} \right)_0^2}} \quad \text{I.2.4-(20)}$$

With the use of equations I.2.4-(19) and I.2.4-(20) to replace  $r$  and  $\psi$  by linear functions of  $Z$ , equation I.2.4-(17) yields an approximate equation for the acceleration due to gravity as a function of the geometric altitude (shown graphically in fig. I.2.4(b)).

**I.2.5 GEOPOTENTIAL.**—In accordance with the equation I.2.4-(5) relating the geometric altitude  $Z$  to the geopotential  $\Phi$ , the following equation is used to define the geopotential altitude  $H$ :

$$H = \frac{1}{g_0} \Phi = \int_0^Z \frac{g}{g_0} dZ \quad \text{I.2.5-(1)}$$

Here,  $g_0$  denotes the standard sea-level value of the acceleration due to gravity. As in the case of equa-

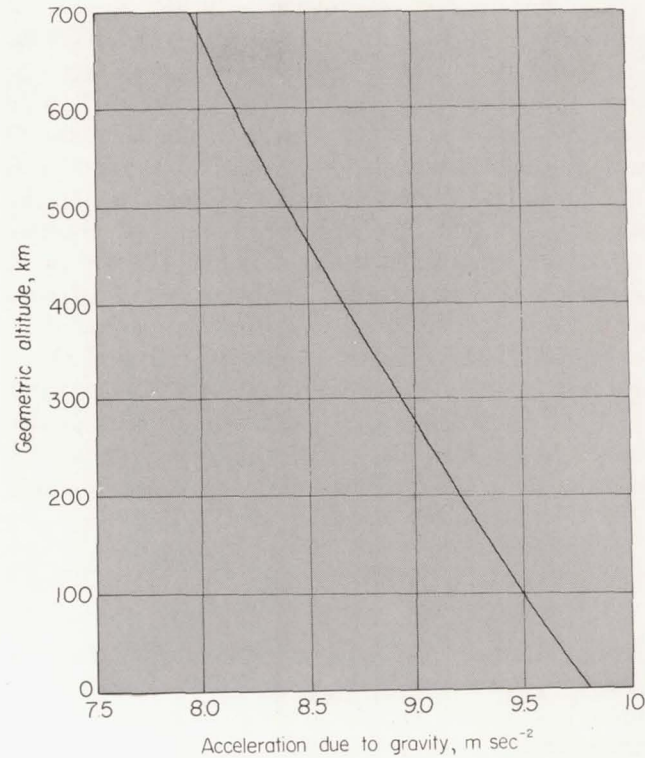


FIGURE I.2.4(b).—Acceleration due to gravity  $g$  as a function of geometric altitude  $Z$ .

tion I.2.4-(5), the integration in equation I.2.5-(1) is performed along the line of force which passes through the point in question. (The geopotential altitude as defined in eq. I.2.5-(1) has the dimensions of length and is numerically equal to the corresponding geopotential altitude measured in "geopotential length" units (for example, "standard geopotential meter," symbol  $m'$ , where  $1 m' = 9.80665 m^2 \text{ sec}^{-2}$ ). The quantity  $H$  is physically equivalent to  $\Phi$ , which is the work done in elevating unit mass from sea level to (geometric) altitude  $Z$ . The definition of  $H$  given above is not the conventional meteorological one in which  $g_0$  in eq. I.2.5-(1) would be taken as dimensionless and  $H$  would have the dimensions of  $(\text{Length})^2 (\text{Time})^{-2}$ , that is, "geopotential length." The definition adopted here avoids the confusing feature of dividing the geopotential  $\Phi$  by a dimensionless number whose value changes when the system of units is changed. For meteorological usage, the column labels  $H$ , m and  $H$ , ft in the tables of Part III can be read  $H'$ ,  $m'$  and  $H'$ ,  $ft'$ , respectively, where the primed units refer to standard geopotential meters and feet, respectively, and  $H'$  is the geopotential altitude in the meteorological sense. For further discussion of geopotential altitude, see ref. 10.)

It is important to realize that the distance measured in physical length (as with a meter bar) between successive geopotential surfaces 1 geopotential unit apart is not constant, but increases in physical distance with increasing elevation.



The meaning of geometric altitude  $Z$  and of geopotential altitude  $H$  can be seen by reference to figure I.2.4(a). If an elementary plumb line is used to explore gravity and if this plumb line is rotating with the earth, then, starting at point  $O$  and proceeding outward, the little plumb line will mark out line segments which progress along the curved path  $OP$ . Under the influence of gravitational and centrifugal forces this line  $OP$  will bend polewards as it rises except along the axis of rotation of the earth and along an equatorial radius extended. In figure I.2.4(a), the arc length  $ds$  measured along the line of gravity force from  $P$  to  $P'$  is identical with the increment  $dZ$  in geometric altitude as defined in section I.2.4. That is, the geometric altitude  $Z$  is the physical distance along the line  $OP$ . Since

$$dH = \frac{g}{g_0} dZ \quad \text{I.2.5-(2)}$$

then, clearly, the geopotential altitude is measured also along the line  $OP$  but differs in numerical value because of the variation of the acceleration due to gravity.

It is to be noted that the scale in figure I.2.4(a) is exaggerated in order to show the nature of the curvature of the middle-latitude plumb line (line of force) and to show clearly the relationship between tangent line, radius line, and projections.

**I.2.6 MOLECULAR-SCALE TEMPERATURE.**—The molecular-scale temperature  $T_M$  is defined by

$$T_M = \frac{M_0}{M} T \quad \text{I.2.6-(1)}$$

Molecular-scale temperature is the defining property in this atmosphere and, up to geometric altitude  $Z=90$  km, the molecular-weight ratio  $M/M_0=1$  and hence  $T_M=T$ . Above 90 km,  $M/M_0$  is less than unity and hence  $T_M$  is greater than  $T$ . (See figs. I.2.6(a) and I.2.6(b) for variation of  $T_M$  with altitude.)

The molecular-scale temperature variation is defined as a series of connected segments linear in *geopotential* altitude to  $Z=90$  km, and linear in *geometric* altitude above 90 km. The general form of each linear segment is:

$$T_M = T_{M,b} + L'_M(H - H_b) \quad \text{I.2.6-(2)}$$

to 90 km, and

$$T_M = T_{M,b} + L_M(Z - Z_b) \quad \text{I.2.6-(3)}$$

above 90 km.

It is to be noted that  $L'_M$  is the gradient of molecular-scale temperature with *geopotential* altitude  $\frac{dT_M}{dH}$ , and  $L_M$  is the gradient of molecular-scale

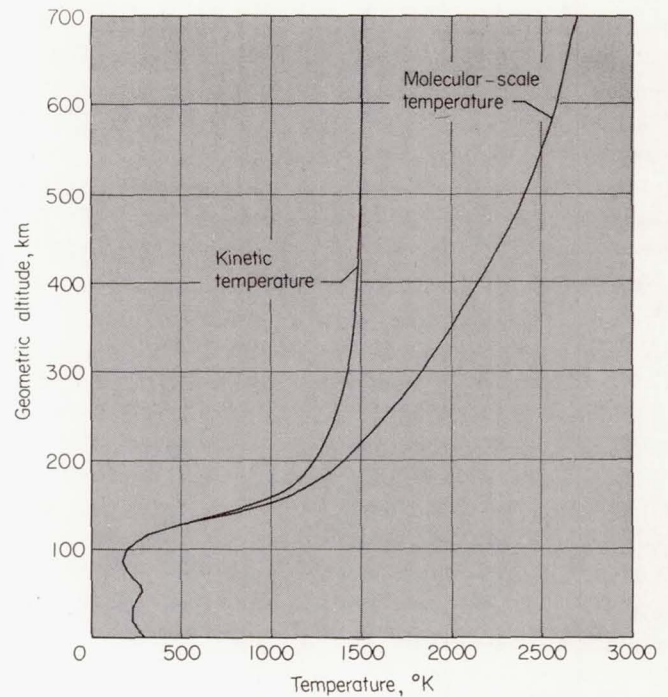


FIGURE I.2.6(a).—Molecular-scale temperature  $T_M$  and kinetic temperature  $T$  as functions of geometric altitude  $Z$ .

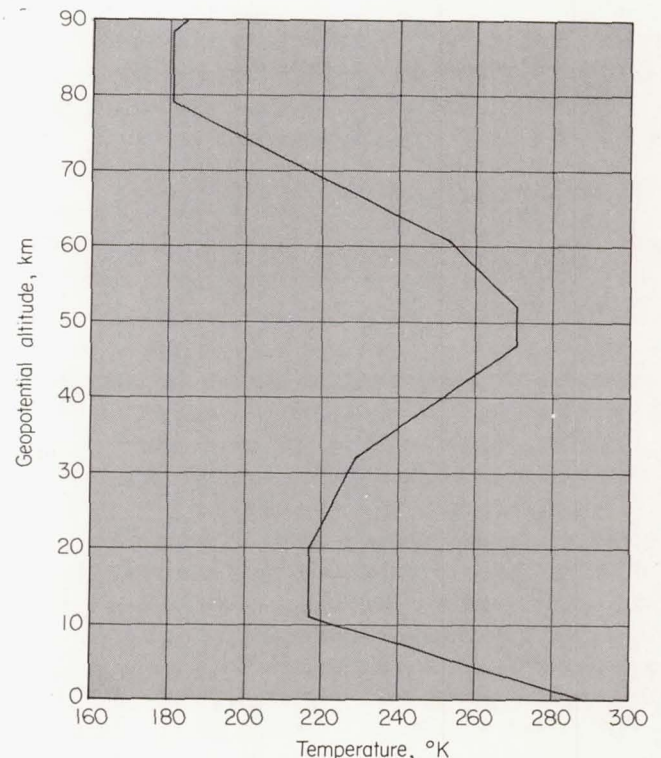


FIGURE I.2.6(b).—Temperature  $T$  as a function of geopotential altitude  $H$ . ( $T_M=T$  below  $Z=90$  km or  $H=88.743$  km.)

temperature with *geometric* altitude  $\frac{dT_M}{dZ}$ . The quantity  $H_b$  is the geopotential altitude at the *base* of a particular layer characterized by a specific



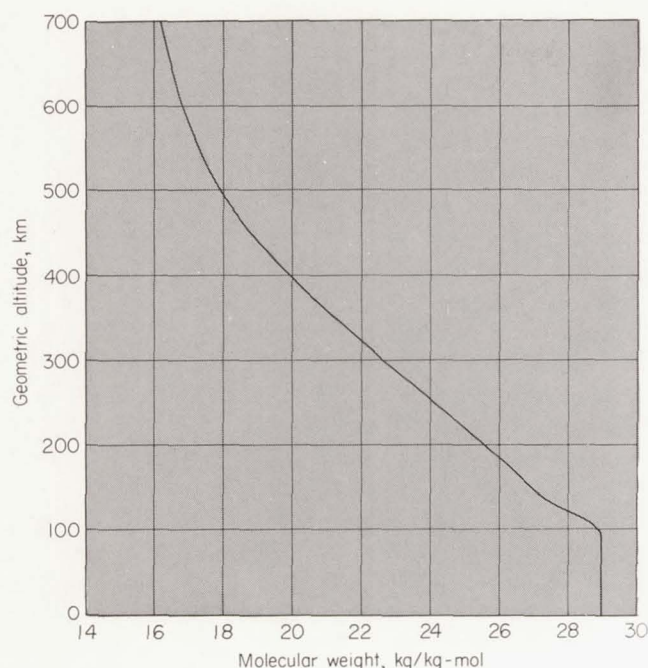


FIGURE I.2.7.—Molecular weight  $M$  as a function of geometric altitude  $Z$ .

value of  $L'_M$ , while  $T_{M,b}$  is the value of  $T_M$  at altitude  $H_b$  or  $Z_b$ , as appropriate. At and above 90 km,  $Z_b$ , the geometric altitude at the base of a particular layer characterized by a specific value of  $L_M$ , is used in place of  $H_b$ . The defining base values and gradients are given in table I.4(e).

It is again emphasized that for altitudes up to 90 km the tables are arranged for entry in terms of

geopotential altitude  $H$  on left-hand pages, while on right-hand pages entry is made in terms of geometric altitude  $Z$ . Above 90 km the tables are arranged for entry in geometric altitude only.

**I.2.7 MOLECULAR WEIGHT.**—Up to  $Z=90$  km the molecular weight  $M$  is taken as constant at 28.9644 (scale:  $C^{12}=12.0000$ ; see section I.2.1 for further discussion of this atomic-weight scale). This value of  $M$  is, to six significant figures, the sea-level value  $M_0$  found from the perfect-gas law (eq. I.2.2-(1)) and the adopted values of  $P_0$ ,  $\rho_0$ ,  $t_0$ , and  $R^*$  (see table I.2.1). The value 28.9644 is equivalent to the value 28.966 (scale: oxygen=16) adopted in resolution 164 of the International Meteorological Organization Twelfth Conference of Directors, 1948, and is equal, to six significant figures, to the mean molecular weight of air calculated from the composition of dry air as given in table I.2.7. Table I.2.7 is taken from reference 11 except for minor modifications based upon recent  $CO_2$  measurements. (See, for example, ref. 12.)

Above 90 km, mainly because of molecular dissociation and diffusive separation, the molecular weight changes as depicted in figure I.2.7. A very limited amount of experimental data about molecular weight is presently available above an altitude of 90 km. The tabulated molecular weights have been calculated from polynomials fitted to the values given in reference 13.

**I.2.8 SEA-LEVEL PROPERTIES.**—Since mean sea level is the zero-altitude reference point in the computations, it is convenient to present numerical values for this reference point. These values are given in table I.2.8.

TABLE I.2.7.—NORMAL COMPOSITION OF CLEAN, DRY ATMOSPHERIC AIR NEAR SEA LEVEL

Constituent gas and formula	Content, percent by volume	Content variable relative to its normal	Molecular weight*
Nitrogen ( $N_2$ )	78.084	—	28.0134
Oxygen ( $O_2$ )	20.9476	—	31.9988
Argon (Ar)	0.934	—	39.948
Carbon dioxide ( $CO_2$ )	0.0314	†	44.00995
Neon (Ne)	0.001818	—	20.183
Helium (He)	0.000524	—	4.0026
Krypton (Kr)	0.000114	—	83.80
Xenon (Xe)	0.0000087	—	131.30
Hydrogen ( $H_2$ )	0.00005	?	2.01594
Methane ( $CH_4$ )	0.0002	†	16.04303
Nitrous oxide ( $N_2O$ )	0.00005	—	44.0128
Ozone ( $O_3$ )	Summer: 0 to 0.000007	†	47.9982
	Winter: 0 to 0.000002	†	47.9982
Sulfur dioxide ( $SO_2$ )	0 to 0.0001	†	64.0628
Nitrogen dioxide ( $NO_2$ )	0 to 0.000002	†	46.0055
Ammonia ( $NH_3$ )	0 to trace	†	17.03061
Carbon monoxide (CO)	0 to trace	†	28.01055
Iodine ( $I_2$ )	0 to 0.000001	†	253.8088

\*On basis of carbon-12 isotope scale for which  $C^{12}=12$ .

†The content of the gases marked with a dagger may undergo significant variations from time to time or from place to place relative to the normal indicated for those gases.



TABLE I.2.8.—SEA-LEVEL VALUES OF ATMOSPHERIC PROPERTIES

Symbol	Metric	English
$C_{s,0}$	340.294 m sec <sup>-1</sup>	1116.45 ft sec <sup>-1</sup>
$*g_0$	9.80665 m sec <sup>-2</sup>	32.1741 ft sec <sup>-2</sup>
$H_{P,0}$	8434.5 m	27,672 ft
$k_0$	$6.0530 \times 10^{-6}$ kg-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$4.0674 \times 10^{-6}$ BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>
$L_0$	$6.6328 \times 10^{-8}$ m	$2.1761 \times 10^{-7}$ ft
$M_0$	28.9644 (dimensionless)	28.9644 (dimensionless)
$n_0$	$2.5471 \times 10^{25}$ m <sup>-3</sup>	$7.2127 \times 10^{23}$ ft <sup>-3</sup>
$*P_0$	$1.013250 \times 10^5$ newtons m <sup>-2</sup>	2116.22 lbf ft <sup>-2</sup>
$*T_0$	288.15° K	518.67° R
$\bar{V}_0$	458.94 m sec <sup>-1</sup>	1505.7 ft sec <sup>-1</sup>
$\eta_0$	$1.4607 \times 10^{-5}$ m <sup>2</sup> sec <sup>-1</sup>	$1.5723 \times 10^{-4}$ ft <sup>2</sup> sec <sup>-1</sup>
$\mu_0$	$1.7894 \times 10^{-5}$ kg m <sup>-1</sup> sec <sup>-1</sup>	$1.2024 \times 10^{-5}$ lb ft <sup>-1</sup> sec <sup>-1</sup>
$\nu_0$	$6.9193 \times 10^9$ sec <sup>-1</sup>	$6.9193 \times 10^9$ sec <sup>-1</sup>
$*\rho_0$	1.2250 kg m <sup>-3</sup>	0.076474 lb ft <sup>-3</sup>
$*\sigma_0$	$3.65 \times 10^{-10}$ m	$11.975 \times 10^{-10}$ ft
$\omega_0$	12.013 kg m <sup>-2</sup> sec <sup>-2</sup>	2.4605 lb ft <sup>-2</sup> sec <sup>-2</sup>

\*These values are adopted for purposes of computation. The remaining values are derived from the adopted values.

I.2.9 ABSOLUTE TEMPERATURE.—The absolute temperature (in °K) of the melting point of ice under a pressure of 101,325.0 newtons m<sup>-2</sup> is taken as

$$T_i = 273.15^\circ \text{K}$$

based on the internationally adopted redefinition of the Kelvin scale. Temperatures  $T$  on the absolute scale (°K) are taken as

$$T = T_i + t \quad \text{I.2.9-(1)}$$

where  $t$  is the temperature on the Celsius scale (°C). The magnitudes of the Kelvin and the Celsius degrees are equal.

Determination of the value of atmospheric temperature  $T$  at great altitudes, using conventional measuring techniques, requires a knowledge of molecular weight  $M$  of the air at that altitude. Without this knowledge of molecular weight, measurements yield only the value of  $T/M$ . Because of the uncertainty in the value of  $M$  at high altitudes, the temperature measurements from rockets are derived from the ratio  $T/M$ . This ratio, however, may be shown to relate the basic atmospheric properties of pressure, density, specific weight, scale height, particle speed, and speed of sound to altitude. That is, the altitude function of this ratio defines the altitude function of these properties. Thus, it is possible to find values of  $T$  to the degree of reliability with which  $M$  can be determined.

I.2.10 PRESSURE.—Within an atmospheric layer throughout which  $T_M$  is a linear function of  $H$ , the hydrostatic equation and the perfect gas law yield the following expression for the pressure:

$$\log_e P = \log_e P_b - \frac{g_0}{L'_M} \frac{M_0}{R^*} \log_e \frac{L'_M(H - H_b) + T_{M,b}}{T_{M,b}} \quad (L'_M \neq 0) \quad \text{I.2.10-(1)}$$

$$\log_e P = \log_e P_b - \frac{g_0 M_0}{R^*} \frac{1}{T_{M,b}} (H - H_b) \quad (L'_M = 0) \quad \text{I.2.10-(2)}$$

Or, alternately,

$$\frac{P}{P_b} = \left( \frac{T_{M,b}}{T_{M,b} + L'_M h} \right)^{\frac{g_0 M_0}{R^* L'_M}} \quad (L'_M \neq 0) \quad \text{I.2.10-(3)}$$

and

$$\frac{P}{P_b} = \exp \left( -\frac{g_0 M_0 h}{R^* T_{M,b}} \right) \quad (L'_M = 0) \quad \text{I.2.10-(4)}$$

wherein

$$h = H - H_b$$

The foregoing expressions, which are in terms of *geopotential* height,  $H$ , are used to 90 km. Since geometric height is used from 90 to 700 km (ref. 13), the expression for pressure within a layer throughout which  $T_M$  is a linear function of geometric altitude  $Z$  is given by:

$$\log_e P = \log_e P_b - \frac{1}{L_M} \frac{M_0}{R^*} \int_{Z_b}^Z \frac{g dZ}{Z - Z_b + \frac{T_{M,b}}{L_M}} \quad (L_M \neq 0) \quad \text{I.2.10-(5)}$$

and

$$\log_e P = \log_e P_b - \frac{M_0}{R^*} \int_{Z_b}^Z \frac{g dZ}{T_{M,b}} \quad (L_M = 0) \quad \text{I.2.10-(6)}$$

Since  $L_M$  is always greater than zero in the altitude range 90 to 700 km, equation I.2.10-(6) is not required herein, but is retained for completeness.

The variation of pressure with height is given in figure I.2.10.



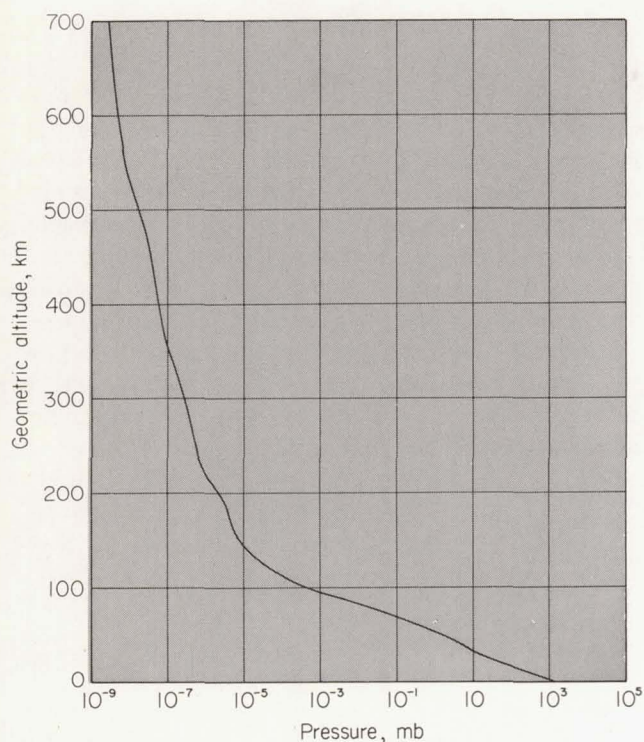


FIGURE I.2.10.—Pressure  $P$  as a function of geometric altitude  $Z$ .

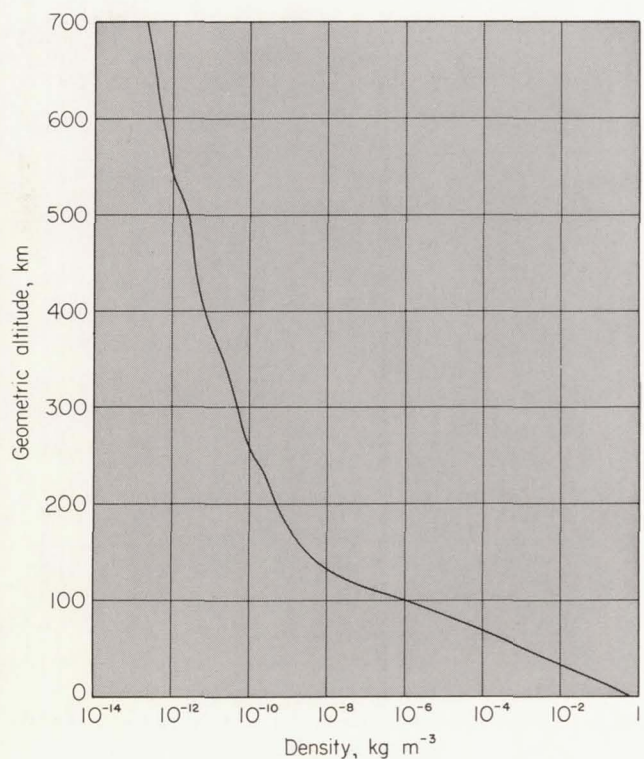


FIGURE I.2.11.—Density  $\rho$  as a function of geometric altitude  $Z$ .

I.2.11 DENSITY.—The density can be calculated from the pressure (see section I.2.10) and the molecular-scale temperature (see section I.2.6) by means of the perfect gas law:

$$\rho = \frac{M_0}{R^*} \frac{P}{T_M} \quad \text{I.2.11-(1)}$$

Variation of density with geometric altitude is given in figure I.2.11.

### I.3 DERIVED QUANTITIES

I.3.1 SPECIFIC WEIGHT.—The specific weight  $\omega$  is the weight per unit volume, that is,

$$\omega = \rho g \quad \text{I.3.1-(1)}$$

Equation I.3.1-(1) and the perfect gas law yield

$$\omega = \rho g = g \frac{M_0}{R^*} \frac{P}{T_M} \quad \text{I.3.1-(2)}$$

Figure I.3.1 gives a graphical representation of specific weight with geometric altitude.

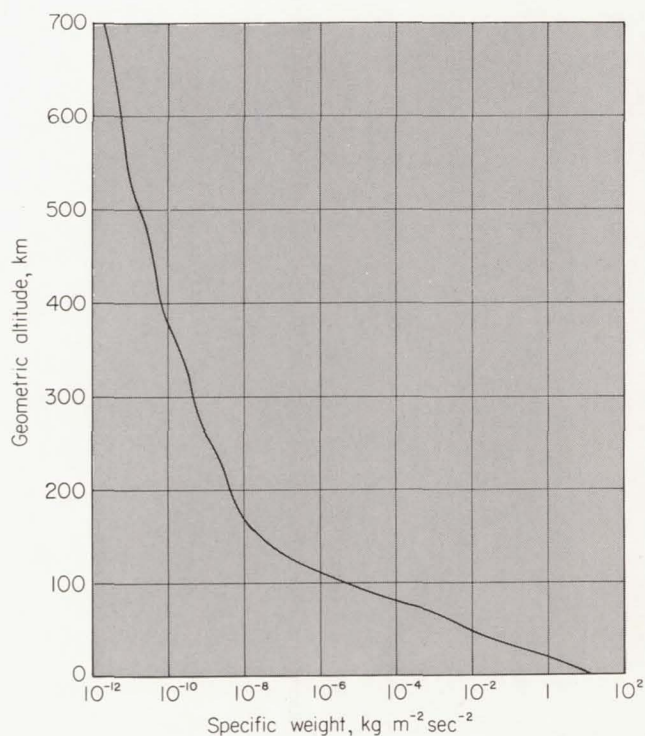


FIGURE I.3.1.—Specific weight  $\omega$  as a function of geometric altitude  $Z$ .

I.3.2 SCALE HEIGHTS.—The pressure scale height (see fig. I.3.2) is widely used and hence is included among the tabular quantities. Pressure scale height is defined by

$$H_P = \frac{R^*}{M_0} \frac{T_M}{g} \quad \text{I.3.2-(1)}$$

In terms of  $H_P$  the pressure ratio is

$$\frac{P}{P_0} = \exp \left( - \int_0^Z \frac{dZ}{H_P} \right) \quad \text{I.3.2-(2)}$$

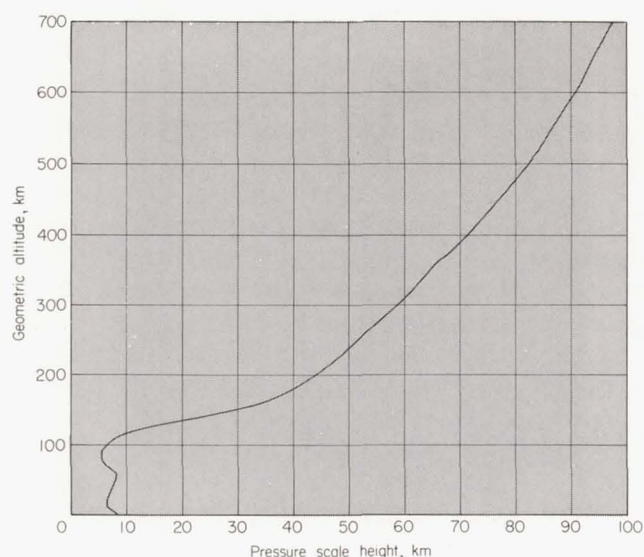


FIGURE I.3.2.—Pressure scale height  $H_P$  as a function of geometric altitude  $Z$ .

The density scale height  $H_\rho$  is defined by

$$H_\rho = \frac{H_P}{1 + \frac{R^*}{M_0 g} \frac{dT_M}{dZ}} \quad \text{I.3.2-(3)}$$

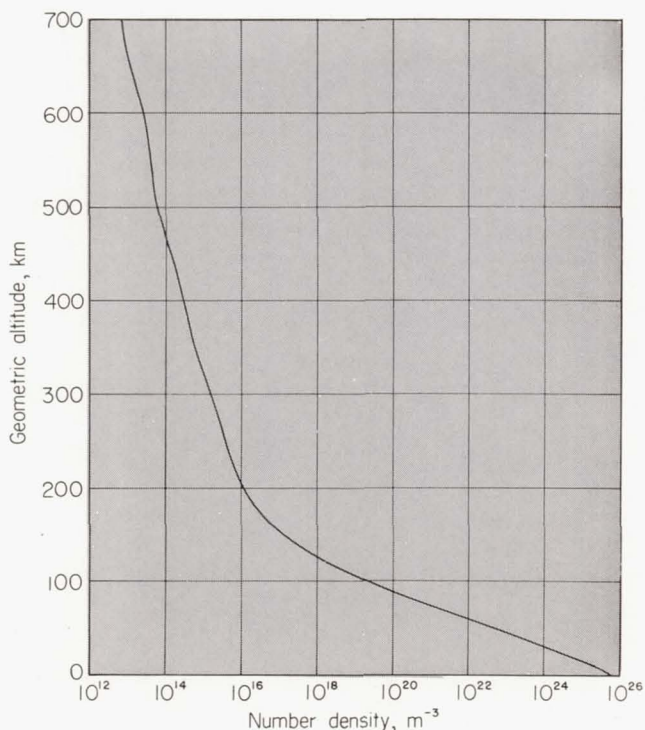


FIGURE I.3.3.—Number density  $n$  as a function of geometric altitude  $Z$ .

**I.3.3 NUMBER DENSITY.**—The number density of air is defined to be the number of atmospheric particles per unit volume and the particles are considered to be neutral. The expression used is

$$n = \frac{M_0}{R^*} \frac{NP}{MT_M} \quad \text{I.3.3-(1)}$$

wherein  $N$  is Avogadro's number and  $M$  is the molecular weight. The variation of number density with geometric altitude is given in figure I.3.3.

**I.3.4 MEAN AIR-PARTICLE SPEED.**—The mean air-particle speed is the arithmetic average of the speeds of all air particles in the volume element being considered. All particles are considered to be neutral. For a valid average to occur, there must, of course, be a sufficient number of particles involved to represent mean conditions. Pressure and temperature gradients within the volume must also be negligible. The mean particle speed is given by

$$\bar{V} = \left( \frac{8 R^*}{\pi M_0} T_M \right)^{1/2} \quad \text{I.3.4-(1)}$$

The variation of particle speed with geometric altitude is shown in figure I.3.4.

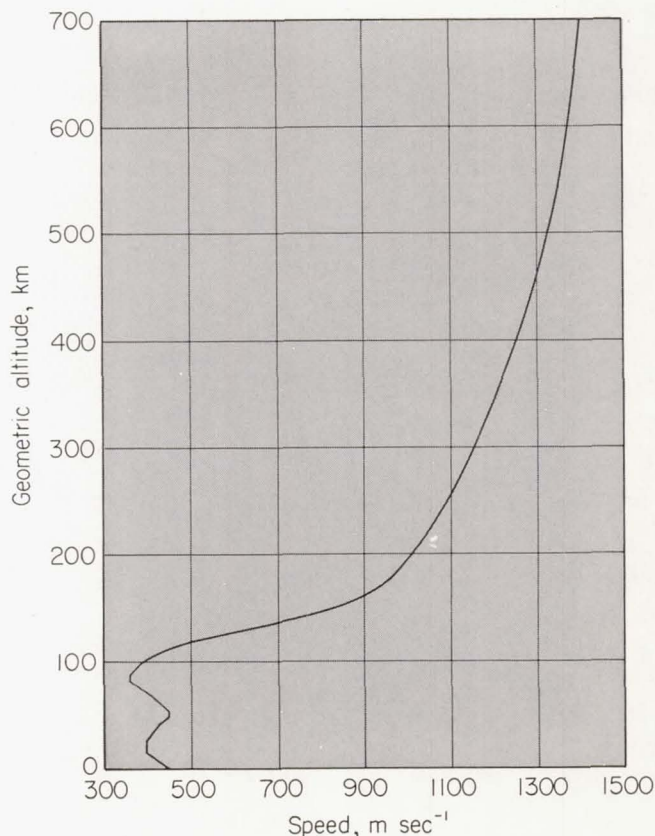


FIGURE I.3.4.—Mean particle speed  $\bar{V}$  as a function of geometric altitude  $Z$ .

**I.3.5 MEAN FREE PATH.**—The mean free path  $L$  is the mean value of the distances traveled by each of the neutral particles, in a selected volume, between successive collisions with other particles in that volume. As before, a meaningful average requires that the selected volume be big enough to contain a



large number of particles. The computational form for  $L$  is

$$L = \frac{1}{(2)^{1/2} \pi N \sigma^2} \frac{R^* M T_M}{M_0 P} \quad \text{I.3.5-(1)}$$

This expression at great altitudes is only valid under assumptions that hold  $M$ ,  $T_M$ ,  $P$ , and  $\sigma$  constant throughout the volume used. Figure I.3.5 depicts the mean free path in terms of altitude.

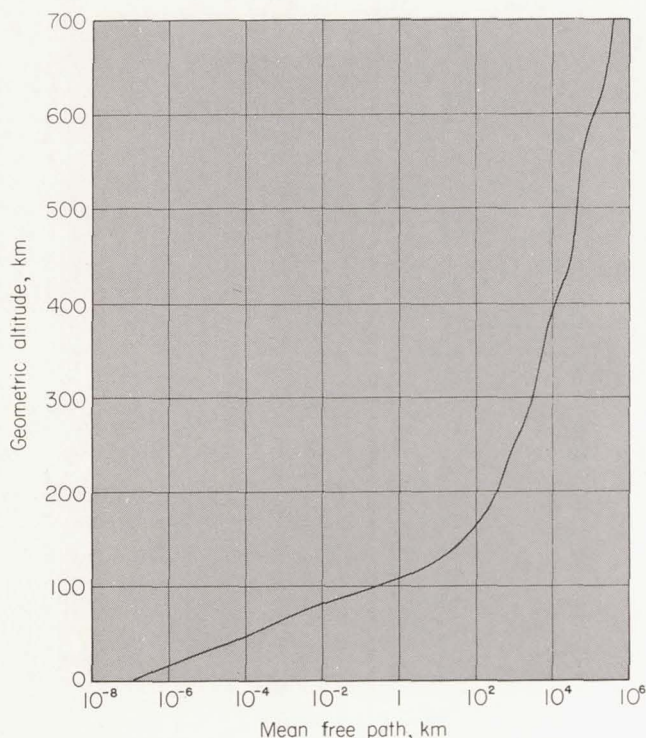


FIGURE I.3.5.—Mean free path  $L$  as a function of geometric altitude  $Z$ .

**I.3.6 COLLISION FREQUENCY.**—The average collision frequency  $\nu$  is the average speed of the air particles within a selected volume divided by the mean free path  $L$  of the particles within that volume. That is,

$$\nu = \frac{\bar{V}}{L} \quad \text{I.3.6-(1)}$$

and in computational form:

$$\nu = 4\sigma^2 N \left( \pi \frac{M_0}{R^*} \right)^{1/2} \frac{P}{M(T_M)^{1/2}} \quad \text{I.3.6-(2)}$$

Note that  $\sigma$  is the effective collision diameter of the mean air particle. The foregoing expressions are taken to apply to neutral particles only, since no considerations involving charged particles are introduced for purposes of developing the main tables.

Figure I.3.6 graphically displays the variation of collision frequency with altitude. See section I.3.4 for a discussion of the assumptions under which equation I.3.6-(2) is valid at great altitudes.

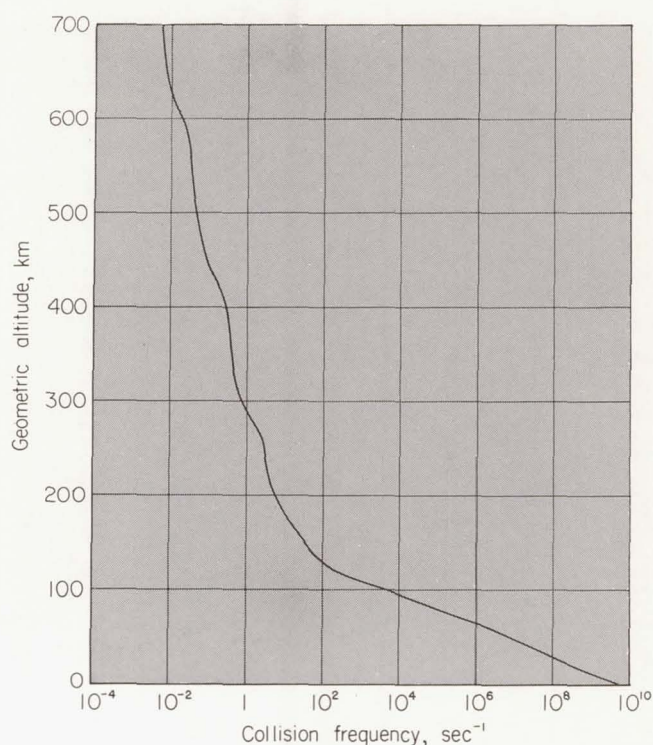


FIGURE I.3.6.—Collision frequency  $\nu$  as a function of geometric altitude  $Z$ .

**I.3.7 SPEED OF SOUND.**—The expression adopted for the speed of sound is

$$C_s = \left( \gamma \frac{R^*}{M_0} T_M \right)^{1/2} \quad \text{I.3.7-(1)}$$

It is to be noted that  $\gamma$  is the ratio of specific heat of air at constant pressure to that at constant volume, and is taken to be 1.40 exact (dimensionless). Equation I.3.7-(1) for the speed of sound applies only when the sound wave is a small perturbation on the ambient condition. Calculated values of  $C_s$  have been found to vary slightly from experimentally determined values.

The limitations of the concept of velocity of sound due to extreme attenuation are also of concern. The attenuation which exists at sea level for high frequencies applies to successively lower frequencies as atmospheric pressure decreases, or as the mean free path increases. For this reason the concept of speed of sound (except for frequencies approaching zero) progressively loses its range of applicability at high altitudes. Hence, the main tables terminate entry of values for speed of sound at 90 km.

Figure I.3.7 shows the variation with altitude of the computed speed of sound.

**I.3.8 COEFFICIENT OF VISCOSITY.**—The coefficient of viscosity is defined as a coefficient of internal friction developed where gas regions move adjacent to each other at different velocities. The following expression, basically from kinetic theory, but with



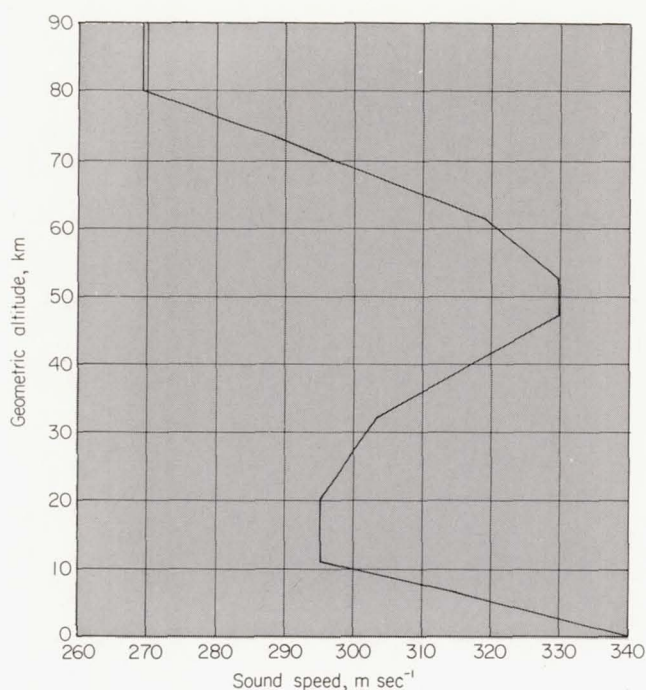


FIGURE I.3.7.—Sound speed  $C_s$  as a function of geometric altitude  $Z$ .

constants derived from experiment, is used for computation of the tables:

$$\mu = \frac{\beta T^{3/2}}{T + S} \quad \text{I.3.8-(1)}$$

In this equation  $\beta$  is a constant equal to  $1.458 \times 10^{-6} \text{ kg sec}^{-1} \text{ m}^{-1} (\text{°K})^{-1/2}$  (exact) and  $S$  is Sutherland's constant, equal to  $110.4^\circ \text{ K}$  (exact).

Equation I.3.8-(1) fails for conditions of very high and very low temperatures and under conditions occurring at great altitudes. (Consequently tabular entries for coefficient of viscosity are terminated at 90 km.) For these reasons caution is necessary in making measurements involving probes and other objects that are small with respect to the mean free path of molecules in the region of 32 to 90 km.

The variation of the coefficient of viscosity with altitude is shown in figure I.3.8.

**I.3.9 KINEMATIC VISCOSITY.**—Kinematic viscosity is defined as the ratio of the coefficient of viscosity of a gas to the density of that gas; that is,

$$\eta = \frac{\mu}{\rho} \quad \text{I.3.9-(1)}$$

Limitations of this equation are comparable to those discussed in section I.3.8, and consequently tabular entries of kinematic viscosity are also terminated at the 90-km level. See figure I.3.9 for a graphical representation of the variation of kinematic viscosity with altitude.

**I.3.10 COEFFICIENT OF THERMAL CONDUCTIVITY.**—The empirical expression (ref. 3) adopted for pur-

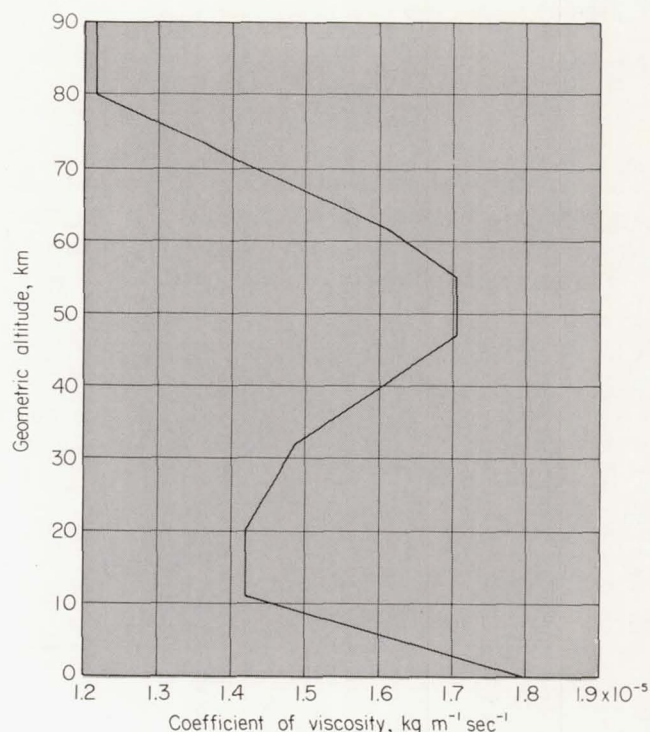


FIGURE I.3.8.—Coefficient of viscosity  $\mu$  as a function of geometric altitude  $Z$ .

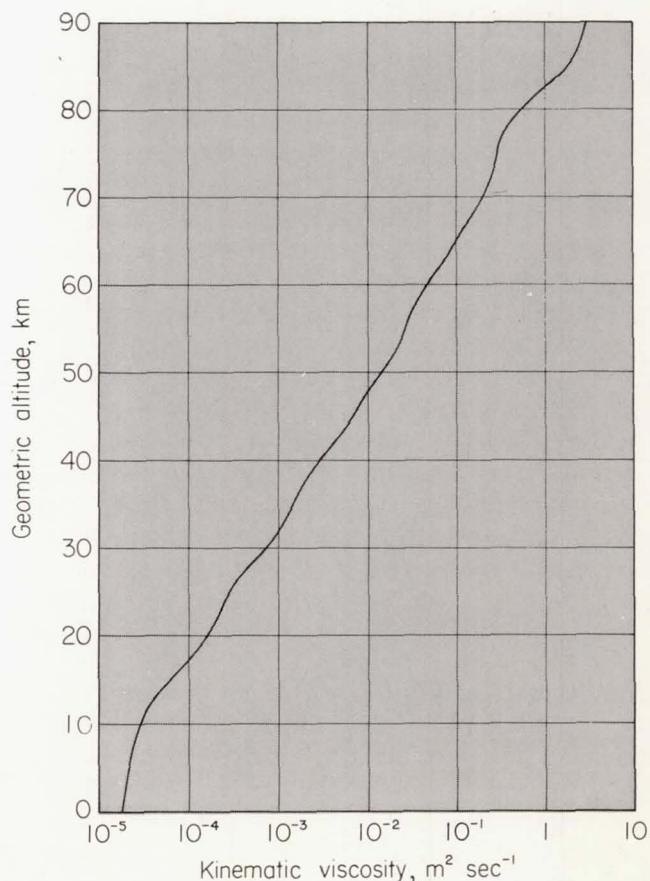


FIGURE I.3.9.—Kinematic viscosity  $\eta$  as a function of geometric altitude  $Z$ .

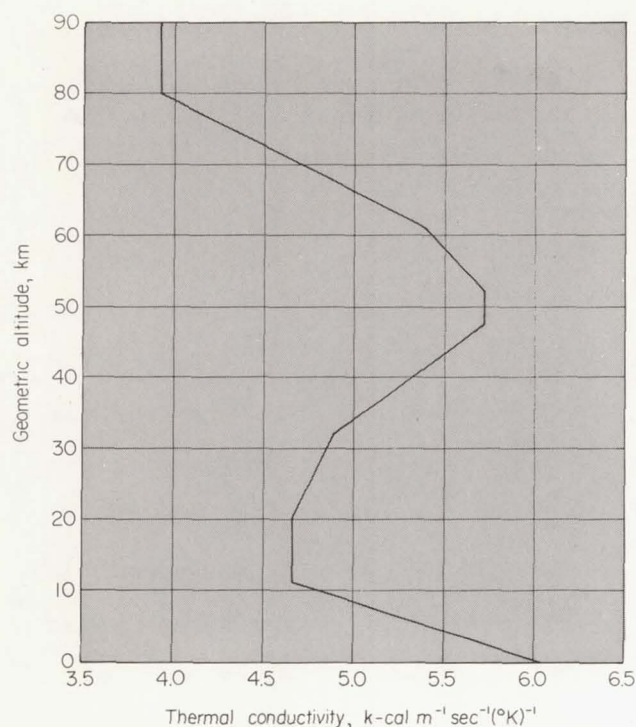


FIGURE I.3.10.—Coefficient of thermal conductivity  $k$  as a function of geometric altitude  $Z$ .

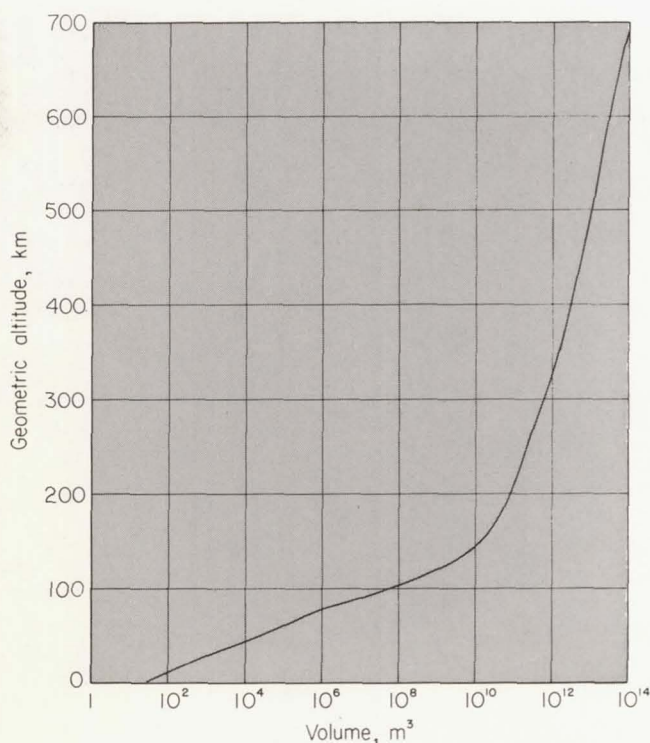


FIGURE I.3.11.—Mole volume  $v$  as a function of geometric altitude  $Z$ .

poses of developing tabular values of the coefficient of thermal conductivity to the 90-km level is as follows:

$$k = \frac{6.325 \times 10^{-7} T^{3/2}}{T + 245.4 \times 10^{-(12/T)}} \quad \text{I.3.10-(1)}$$

Kinetic-theory determinations of thermal conductivity of some monatomic gases agree well with observation. For these gases thermal conductivity is directly proportional to the coefficient of viscosity. Modification of the simple theory has accounted in part for differences introduced by polyatomic molecules and by mixtures of gases. Tabular entry of values for coefficient of thermal conductivity is terminated at 90 km. The variation with height of this quantity is shown in figure I.3.10.

I.3.11 MOLE VOLUME.—While not tabulated, mole volume enters into certain ancillary calculations. It is defined as the volume per mole; that is,

$$v = \frac{M}{\rho} = \frac{R^*}{M_0} \frac{MT_M}{P} \quad \text{I.3.11-(1)}$$

Figure I.3.11 gives the relationship between mole volume and altitude.

#### I.4. TABLES OF UNITS, CONVERSION FACTORS, AND DEFINING PROPERTIES

TABLE I.4(a).—METRIC TO ENGLISH CONVERSIONS OF UNITS OF LENGTH, MASS, AND GEOPOTENTIAL

A. Defined relations (the constants are adopted as being exact):

1 foot	= 0.3048 meter
1 i.n. mi	= 1,852 meters
1 pound	= 0.45359237 kilogram
1 standard geopotential foot	= 0.3048 standard geopotential meter

B. Derived relations:

1 meter	= 3.2808399... feet
1 meter	= 5.3995680... $\times 10^{-4}$ i.n. mi
1 kilogram	= 2.2046226... pounds
1 i.n. mi	= 6,076.1155... feet
1 foot	= 1.6457883... $\times 10^{-4}$ i.n. mi
1 standard geopotential meter	= 3.2808399... standard geopotential feet

TABLE I.4(b).—METRIC TO ENGLISH AND ABSOLUTE TO NONABSOLUTE CONVERSIONS OF TEMPERATURE UNITS

A. Defined:

$$t(^{\circ}\text{C}) = T(^{\circ}\text{K}) - T_i(^{\circ}\text{K}), \text{ where } T_i(^{\circ}\text{K}) = 273.15(^{\circ}\text{K})$$

$$T(^{\circ}\text{R}) = 1.8 T(^{\circ}\text{K})$$

$$t(^{\circ}\text{F}) - t_i(^{\circ}\text{F}) = T(^{\circ}\text{R}) - T_i(^{\circ}\text{R}), \text{ where } t_i(^{\circ}\text{F}) = 32(^{\circ}\text{F})$$

B. Derived relations:

$$t_i(^{\circ}\text{C}) = 0(^{\circ}\text{C})$$

$$T_i(^{\circ}\text{R}) = 491.670(^{\circ}\text{R})$$

$$t(^{\circ}\text{C}) = [T(^{\circ}\text{R}) - T_i(^{\circ}\text{R})]/1.8 = [t(^{\circ}\text{F}) - t_i(^{\circ}\text{F})]/1.8$$

$$T(^{\circ}\text{R}) = 1.8[t(^{\circ}\text{C}) + 273.15(^{\circ}\text{C})] = t(^{\circ}\text{F}) - t_i(^{\circ}\text{F}) + 491.670(^{\circ}\text{R})$$

$$t(^{\circ}\text{F}) - 32(^{\circ}\text{F}) = 1.8t(^{\circ}\text{C}) = 1.8[T(^{\circ}\text{K}) - 273.15(^{\circ}\text{K})]$$



TABLE I.4(c).—ABSOLUTE SYSTEMS OF UNITS TO ABSOLUTE-FORCE, GRAVITATIONAL SYSTEM OF UNITS, METRIC-ENGLISH

## A. Defined:

$$1 \text{ force unit} = 1 \text{ mass unit} \times g_0$$

## B. Derived relations:

$$1 \text{ kgf} = 9.80665 \text{ kg m sec}^{-2}$$

$$1 \text{ kg} = \frac{1}{9.80665} \text{ kgf sec}^2 \text{ m}^{-1} = 0.10197162 \text{ kgf sec}^2 \text{ m}^{-1}$$

$$1 \text{ lbf} = 0.45359237 \text{ kgf}$$

$$1 \text{ lbf} = 32.174049 \text{ lb ft sec}^{-2}$$

$$1 \text{ lb} = 0.031080950 \text{ lbf sec}^2 \text{ ft}^{-1}$$

$$= 0.031080950 \text{ slug}$$

$$1 \text{ slug} = 32.174049 \text{ lb}$$

TABLE I.4(d).—THERMAL TO MECHANICAL UNITS, METRIC-ENGLISH

## A. Defined relations:\*

$$1 \text{ kg-cal} = \frac{1}{860} \text{ kw-hr (exact)}$$

$$1 \text{ kg-cal} = \frac{1.8}{0.45359237} \text{ BTU} = 3.9683207 \text{ BTU}$$

$$1 \text{ joule} = 1 \text{ watt-sec}$$

## B. Derived relations:

$$1 \text{ kw-hr} = 3.6 \times 10^6 \text{ watt sec} = 3.6 \times 10^6 \text{ joules}$$

$$1 \text{ kg-cal} = \frac{3.6 \times 10^6}{860} \text{ joules} = 4,186.0465 \text{ joules}$$

$$= 4,186.0465 \text{ kg m}^2 \text{ sec}^{-2}$$

$$1 \text{ kg-cal} = \frac{3.6 \times 10^6}{860 \times 9.80665} \text{ m kgf} = 426.85795 \text{ m kgf}$$

$$1 \text{ kg-cal} = \frac{3.6 \times 10^6}{860 \times 9.80665 \times 0.45359237 \times 0.3048} \text{ ft lbf}$$

$$= 3087.4696 \text{ ft lbf}$$

$$1 \text{ BTU} = \frac{0.45359237}{1.8} \text{ kg-cal} = 0.25199576 \text{ kg-cal}$$

$$1 \text{ BTU} = \frac{3.6 \times 10^6}{860 \times 0.3048 \times 9.80665 \times 1.8} \text{ ft lbf}$$

$$= 778.02922 \text{ ft lbf}$$

$$1 \text{ BTU} = \frac{3.6 \times 10^6}{860 \times (0.3048)^2 \times 1.8} \text{ lb ft}^2 \text{ sec}^{-2}$$

$$= 25032.349 \text{ lb ft}^2 \text{ sec}^{-2}$$

\*The calorie used here is the International Steam Table calorie and the joule is the mean international joule.

TABLE I.4(e).—DEFINING PROPERTIES OF THE STANDARD ATMOSPHERE

Altitude, <i>H</i> , km	Molecular- scale tem- perature, <i>T<sub>M</sub></i> , °K	Gradient, <i>L'<sub>M</sub></i> , °K/km	Molecular weight, <i>M</i>	Kinetic temper- ature, <i>T</i> , °K
0.000	288.15		28.9644	288.15
11.000	216.65	-6.5	28.9644	216.65
20.000	216.65	0.0	28.9644	216.65
32.000	228.65	+1.0	28.9644	228.65
47.000	270.65	+2.8	28.9644	270.65
52.000	270.65	0.0	28.9644	270.65
61.000	252.65	-2.0	28.9644	252.65
79.000	180.65	-4.0	28.9644	180.65
88.743	180.65	0.0	28.9644	180.65

Altitude, <i>Z</i> , km	Molecular- scale tem- perature, <i>T<sub>M</sub></i> , °K	Gradient, <i>L<sub>M</sub></i> , °K/km	Molecular weight, <i>M</i>	Kinetic temper- ature, <i>T</i> , °K
90	180.65	+3	28.9644	180.65
100	210.65	+5	28.88	210.02
110	260.65	+10	28.56	257.00
120	360.65	+20	28.07	349.49
150	960.65	+15	26.92	892.79
160	1,110.65	+10	26.66	1,022.2
170	1,210.65	+7	26.40	1,103.4
190	1,350.65	+5	25.85	1,205.4
230	1,550.65	+4	24.70	1,322.3
300	1,830.65	+3.3	22.66	1,432.1
400	2,160.65	+2.6	19.94	1,487.4
500	2,420.65	+1.7	17.94	1,499.2
600	2,590.65	+1.1	16.84	1,506.1
700	2,700.65		16.17	1,507.6



PART II

Additional Information Relating to the Atmosphere

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## PART II

# Additional Information Relating to the Atmosphere

### II.0 INTRODUCTION

Part II of this document gives additional information relating to the atmosphere. This additional information will be found useful in extending the scope of Parts I and III, as well as in gaining an appreciation of trends in knowledge of the earth's atmosphere.

### II.1 VALIDITY

The validity of Parts I and III of this document, insofar as the equations and fundamental numbers (constants) are concerned, is satisfactorily established by references and discussion throughout Part I. It is in the domain of validity of the assumptions made in Part I that further examination is necessary.

It will be recalled from the foreword and from Part I that the *U.S. Standard Atmosphere, 1962* is an idealized, middle-latitude (approximately 45°) year-round mean over the range of solar activity between sunspot minima and maxima. It is further assumed in Part I that the atmosphere is a perfect gas, that it rotates everywhere with the earth, and that it is composed of neutral particles. Despite these assumptions, however, the adopted temperature profile (and molecular-weight profile) are based upon experimentally determined values, modified slightly to achieve easily computable gradients. To some extent, therefore, implicit account is taken of the real features of the atmosphere; that is, the standard is considerably more realistic than the simplifying assumptions would indicate.

Clearly, however, the real atmosphere differs from the standard and there are, of course, recognized departures, both temporal and spatial. Furthermore, in the higher reaches of the atmosphere the facts are well enough established now to extend the speculative region to 700 km with greater confidence than heretofore. For these reasons the systematic variations and observed (or inferred) extremes are discussed in the following section.

### II.2 SYSTEMATIC VARIATIONS AND OBSERVED AND INFERRED EXTREMES

**II.2.1 SEA LEVEL TO 90 KILOMETERS.**—In the 0- to 90-km region, latitudinal and seasonal variations about the mean are present. In addition, both observation and inference show that extreme values of considerable magnitude exist. This information is

being developed in detail in a series of supplemental atmospheres to be published.

A family of nine atmospheres, extending up to 90 km, is being prepared under the direction of COESA. They include a mean annual atmosphere for 15° N. latitude (a region of small seasonal change) and January and July atmospheres for 30°, 45°, 60°, and 75° N. latitude. These atmospheres, supplemental to the *U.S. Standard Atmosphere, 1962*, will provide information to scientists and engineers on latitudinal, seasonal, and interdiurnal changes in atmospheric structure in order that they may investigate the importance of these departures from the standard in experiments and designs.

Based on preliminary work on these supplemental atmospheres for latitudes 15° to 60° N., envelopes of mean seasonal densities and temperatures have been estimated and are given in figures II.2.1(a) and II.2.1(b) for altitudes up to 90 km. The values shown by the envelope curves of any of the thermodynamic properties of the atmosphere could not possibly be encountered at all altitudes at any given location and time. The warmest surface layers in the tropics are associated with the coldest tropopause level, for example.

**Systematic density variations.**—The estimated range of systematic changes (seasonal and latitudinal variations, equator to 60° N.) of density is indicated by horizontal arrows in figure II.2.1(a) as percentage departures from standard. Above 30 km, both the largest negative and the largest positive departures occur at 60° N. latitude. The negative departures represent mean winter conditions and the positive departures represent mean summer conditions. Below 30 km, the range cannot be depicted for all levels by the maximum and minimum seasonal values at only one latitude.

The minimum latitudinal and seasonal variability, less than 1 percent, occurs at the isopycnic level near 8 km. Other levels of minimum variability, less pronounced than at the isopycnic level, occur at 26 and 85 km. Maximum seasonal and latitudinal variations occur near 15 and 70 km.

**Extremes of density.**—Observed extremes of density at levels above 30 km are indicated by circles in figure II.2.1(a). The minimum values were derived by Jones and Peterson (ref. 14) from a 27 January 1958 falling-sphere experiment at Fort Churchill,



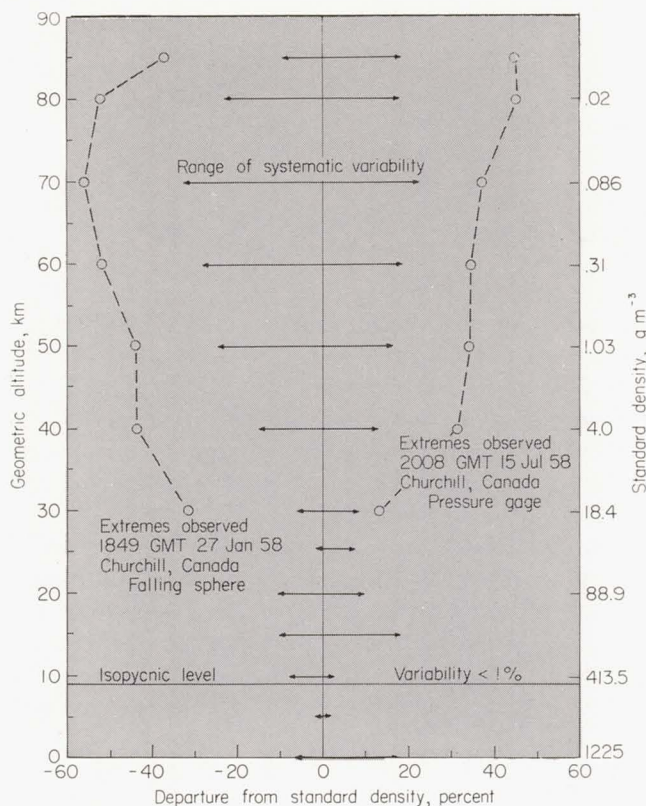


FIGURE II.2.1(a).—Range of systematic variability of density about the *U.S. Standard Atmosphere, 1962*.

Canada. The maximum densities above 40 km were observed by Nelson W. Spencer from a 15 July 1958 rocket flight (pressure sensor) at Fort Churchill, Canada (ref. 30).

**Temperature variations.**—Extreme temperature observations and mean seasonal variations about the *U.S. Standard Atmosphere, 1962* are shown in figure II.2.1(b). The range of mean winter and summer temperatures, shown as horizontal arrows, is based upon hemispheric radiosonde data to 30 km. Between 30 and 60 km it is based on observations from instruments released by meteorological rockets from nearly a dozen northern-hemisphere launching sites. The extreme observations and the variations above 60 km have been extracted from other rather sparse rocket data. These rocket instruments include rocket-grenade temperature experiments, pitot-static pressure measurements, falling-sphere density measurements, and rocket-network temperature thermistors (to 50 km).

Both seasonal fluctuations and observed values are least accurate above 60 km, where direct temperature measurements are apparently subject to greatest errors. The data at these levels are based primarily on very few rocket-grenade observations which involve the use of sound ranging in deriving temperature and wind velocity. Most of the temperature extremes below 50 km are based on thermistor ob-

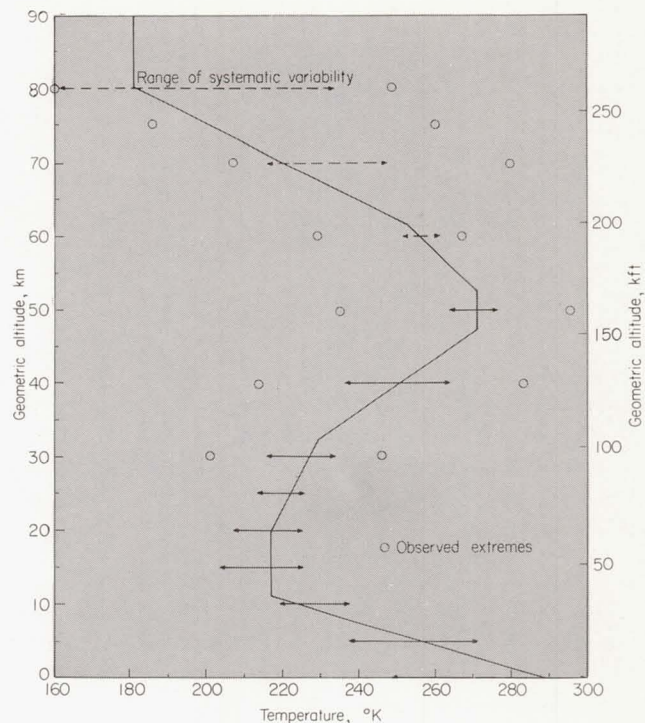


FIGURE II.2.1(b).—Range of systematic variability of temperature about the *U.S. Standard Atmosphere, 1962*.

servations from the many flights of the recently organized semioperational Meteorological Rocket Network (MRN).

Except at the surface, and at heights above 60 km where warm winter temperatures at 60° N. latitude cause large positive departures, the *U.S. Standard Atmosphere, 1962* temperature profile lies near the center of the winter and summer seasonal range. Near 60 km, winter and summer temperature profiles at all latitudes approach or cross the standard. From 60 km to at least 90 km, winter temperatures generally are warmer and summer temperatures cooler than the standard (ref. 15).

**II.2.2 90 KILOMETERS TO 200 KILOMETERS.**—Within the region of 90 to 200 km only observed and inferred extremes are sufficiently well established to warrant discussion. The paucity of data in this region does not permit discussion of systematic variations.

It must be remembered that when data are obtained with various types of measuring equipment (some of it of an experimental nature) the maximum spread in the measured values of a given parameter (the extremes of measured data) may not be at all representative of the actual variability of that parameter. This should be kept in mind when considering measured values of atmospheric properties in the range of 90 to 200 km.

**Extremes of molecular-scale temperature.**—Figure II.2.2(a) shows experimental values of molecular-scale temperature compared with those of the stand-



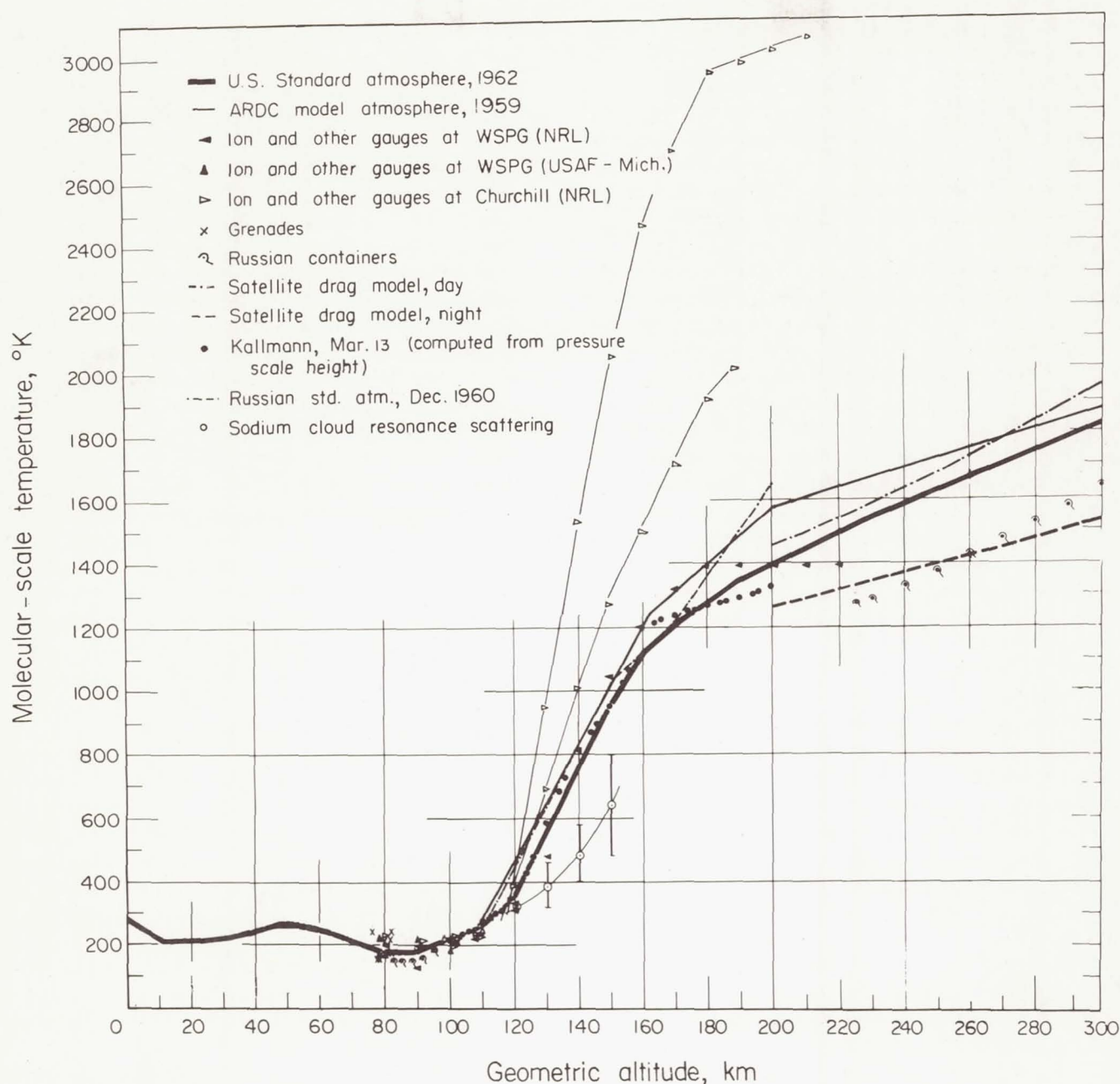


FIGURE II.2.2(a).—Molecular-scale temperatures of *U.S. Standard Atmosphere, 1962* compared with *ARDC Model Atmosphere, 1959* and with available data.

ard, the *ARDC Model Atmosphere, 1959* (ref. 10), and the *USSR Standard Atmosphere, 1960*. The experimental data were obtained primarily at the White Sands Proving Ground, at Churchill, and at Russian rocket-launching sites. All the data presented lie within  $100^{\circ}\text{K}$  of the *U.S. Standard Atmosphere, 1962* (in the 90- to 200-km range) except for three sets of measurements. Two of these measurements, for which the temperatures were substantially higher, were made at Churchill (at high geomagnetic latitude) during the International Geophysical Year near the peak of solar activity, when solar flares were frequent. Thus, not only was the solar 10.7-cm wavelength flux about

$350 \times 10^{-22} \text{ watts m}^{-2}/(\text{cycle sec}^{-1})$  (see section II.3), for which a daytime temperature of  $2,000^{\circ}\text{K}$  to  $2,200^{\circ}\text{K}$  would be predicted at 200 km at low latitudes, but the corpuscular radiation would be expected to be particularly intense. For these reasons, the measured temperatures are probably reasonably accurate, but apply under very unusual conditions. The third set of measurements gives temperatures as much as  $300^{\circ}\text{K}$  below the standard. The measurements were made in terms of the Doppler broadening of the D lines of sodium released in the atmosphere. The reason that these measurements yield lower temperatures is not understood, particularly since this technique has yielded temperatures



(ref. 16) of 1,450° K at higher altitudes in good agreement with other data.

*Extremes of density.*—Density measurements are compared with the *U.S. Standard Atmosphere, 1962* in figure II.2.2(b). It is believed that the two sets of points with very low densities obtained with mass spectrometers between 150 and 210 km are not accurate. The lowest of these was obtained with a Bennett type mass spectrometer at Churchill, Canada, on 20 November 1956. This was an early flight with this mass spectrometer and evidently the instrument did not function well, as can be seen by the apparent increase in density between 200 and 210 km indicated by the instruments. Because the signal strength was small compared with the background, the accuracy of the White Sands Proving Ground ion gauge measurements, which gave low densities above 130 km, is poor. The other data points shown in figure II.2.2(b) are probably reasonably accurate. However, they represent conditions ranging from night to day and minimum to maximum solar activity. At 90 km the measured values lie within a factor of less than 2 on either side of the mean density. The actual atmospheric density probably lies within a factor of 2 on either side of the mean value up to 200 km, although the range of variability is slowly increasing at higher altitudes.

*Extremes of pressure.*—In figure II.2.2(c) pressure data are compared with the standard. These data are basically the same as those in figure II.2.2(b), from which they are derived by means of the gas laws. The mass-spectrometer data are not included. Since in this altitude region pressure is derived from density and the slope of the density curve, the variation in the derived values of pressure will be greater than the variation in the density measurements. This does not necessarily imply that the actual variation in atmospheric pressure is any greater than that in the density. At 90 km, pressures as high as three times the standard have been measured. At 120 km the range is a factor of about 2.5 on either side of the mean. This range gradually increases until it is almost a factor of 4 on either side of the mean at 200 km altitude. Data shown in figures II.2.2(a), (b), and (c) are drawn from investigations of a number of authors (refs. 17 to 32).

II.2.3 200 KILOMETERS TO 700 KILOMETERS.—Systematic variations are identifiable in the 200- to 700-km range, but insufficient data exist to deal with extreme values. These systematic variations have been available only since the analysis of drag effects on the motions of artificial satellites.

An analysis of atmospheric drag effects on the motion of artificial satellites has revealed the existence of large density fluctuations in the atmosphere above the height of 200 km. Although several classes of fluctuation can be distinguished (that is, characteristic amplitude vs. time pattern), all have

one feature in common—they are caused by variations in heating of the earth's atmosphere due to variations in energy coming from the sun. In addition to erratic and semiperiodic changes, there is a more regular diurnal variation connected with the position of the sun with respect to the zenith.

*The atmospheric model.*—Since all the density fluctuations, including the diurnal variation, are of thermal origin, and since the kinetic temperature above 300 km is essentially independent of height, it would be convenient and much simpler to use the kinetic temperature as a parameter to describe atmospheric variations. Unfortunately, the observed quantity is the density, not the temperature. In order to convert densities into temperatures, there must first be generated a good atmospheric model in which densities are tabulated for many different temperatures. Nicolet's 1961 model (ref. 33) has been shown by Jacchia (refs. 34 and 35) to be adequate for the purpose, at least for heights above 300 km. This model is based on diffusion equilibrium, with known boundary conditions at a height of 120 km, with densities as a function of height for 12 standard top-atmospheric temperatures ranging from 773° K to 2,133° K; thus it is possible to interpolate the temperature when a density is given for a specified height, and the reverse. *All the temperatures mentioned in this portion of the discussion are top-atmospheric temperatures derived from densities by means of Nicolet's 1961 model.* It is to be noted that Nicolet has developed atmospheric models based on diffusion equilibrium in which helium plays a role. Heat conduction is the essential process that determined the gradient of the temperature.

Introduction of boundary conditions at 120 km, where diffusion begins for major constituents, leads to atmospheric models that can be used for analysis of day-to-night and solar activity variations in the whole thermosphere from 150 to 2,000 km. An analysis of the behavior of the heterosphere (i.e., of the terrestrial atmosphere where the mean molecular mass cannot be taken as a constant parameter) requires a theoretical study to supplement observational results from which it is not yet possible to obtain all the parameters needed for a complete picture of the physical conditions.

The variations of temperature and molecular weight with height in Nicolet's model differ from those adopted in the *U.S. Standard Atmosphere, 1962*. As a consequence, a temperature profile derived from Nicolet's tables for the densities of the present model shows considerable difference from the temperature profile in table I of reference 13. These differences are shown in table II.2.3(a).

As can be seen, apart from the critical region around a geometric height of 200 km, the difference in temperature between the two atmospheric models is about 200° K on the average, and it can be said



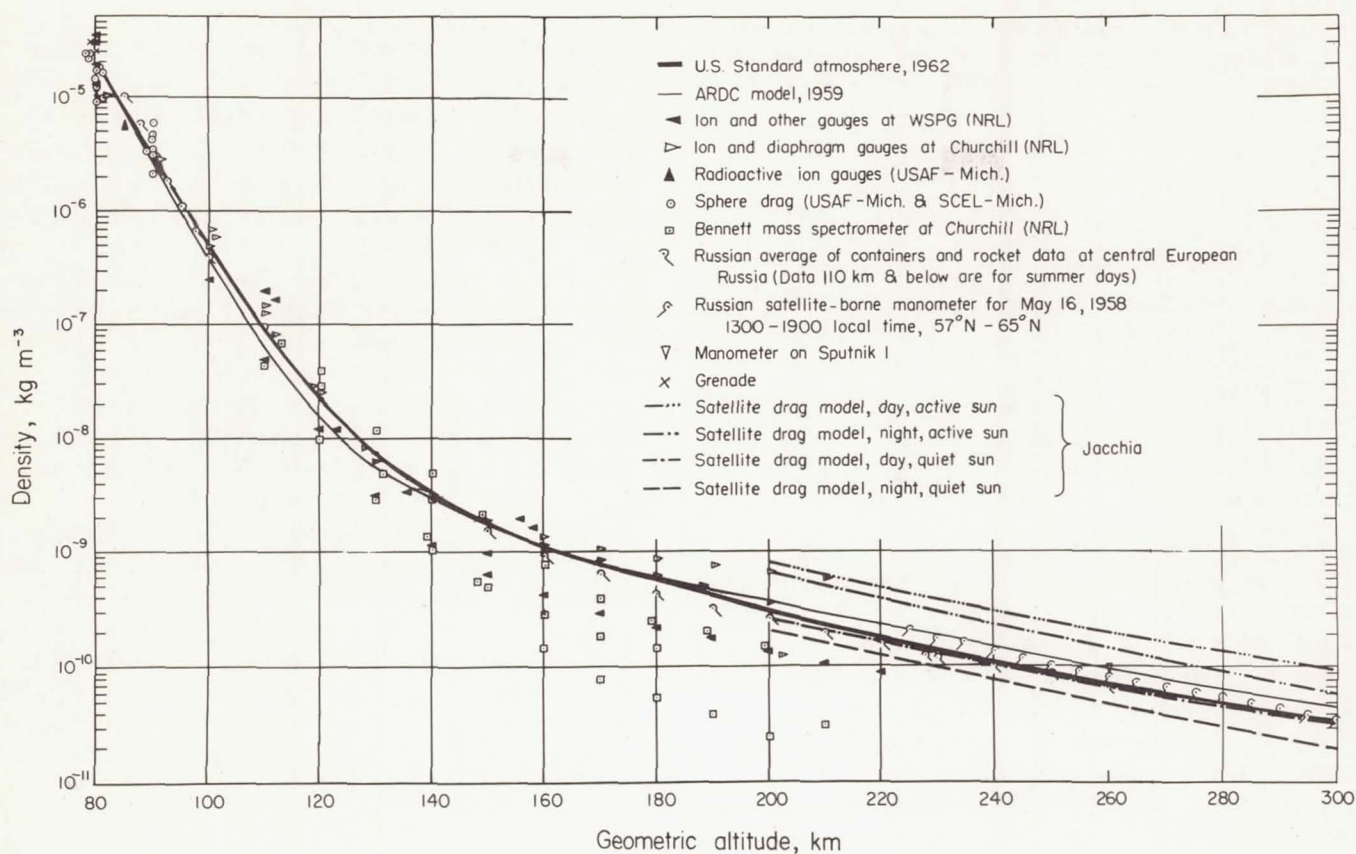


FIGURE II.2.2(b).—Density of U.S. Standard Atmosphere, 1962 compared with ARDC Model Atmosphere, 1959 and with available data.

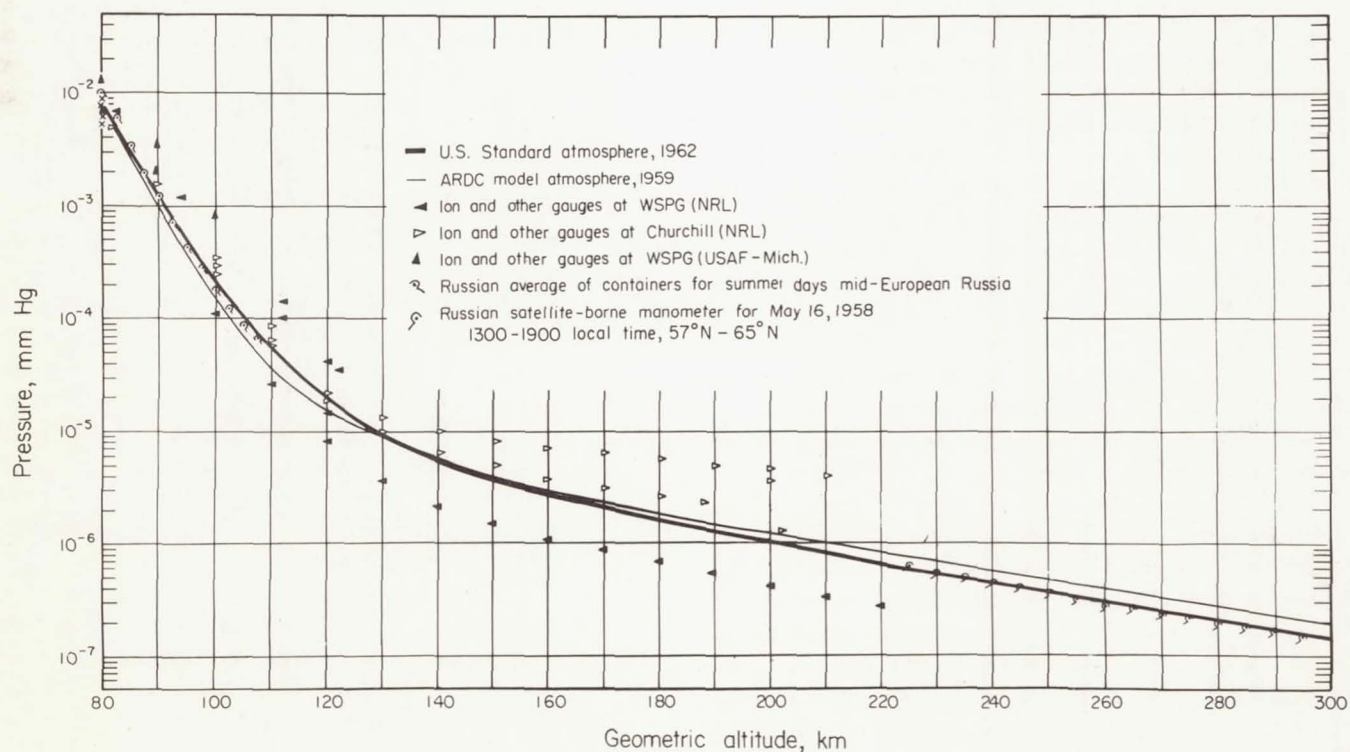


FIGURE II.2.2(c).—Pressures of U.S. Standard Atmosphere, 1962 compared with ARDC Model Atmosphere, 1959 and with available data.



TABLE II.2.3(a).—TEMPERATURE DIFFERENCES BETWEEN THE PRESENT ATMOSPHERIC MODEL AND NICOLET'S 1961 MODEL

Z, km	*log <sub>10</sub> ρ	Temperature, °K		
		Present model	Nicolet	Difference
200	−12.480	1,236	900	336
300	−13.446	1,432	1,184	248
400	−14.188	1,487	1,248	239
500	−14.803	1,499	1,282	217
600	−15.334	1,506	1,316	190
700	−15.814	1,508	1,339	169

\*For ρ in gm cm<sup>−3</sup>.

that, to a fair approximation, the quasi-asymptotic temperature of 1,500° K of the present model corresponds to an asymptotic temperature of 1,300° K in Nicolet's model. Therefore, the Nicolet temperature of 1,300° K will be taken as representative of the present model and density corrections will be computed on the basis of Nicolet's model for temperatures other than 1,300° K.

*Causes of variations.*—Upper-atmospheric temperature variations, and the density variations that occur as a consequence thereof, can be divided into three categories:

- (a) Variations caused by the variable position of the sun with respect to a given point above the earth's surface
- (b) Fluctuations caused by variations in the extreme ultraviolet flux from the sun
- (c) Fluctuations caused by variations in the corpuscular flux from the sun

Since observations indicate that through all these variations the temperature above 300 km remains, to a first approximation, rather independent of height, it must be assumed that most of the heating, both electromagnetic and corpuscular, occurs at heights below 300 km. The variations under (a) are usually referred to as the diurnal effect (refs. 36 to 38) and probably result from heat generated by absorption of ultraviolet radiation (ref. 39).

*The diurnal bulge.*—The maximum temperature seems to occur at a point on the globe about 30° eastward in longitude from the subsolar point. This is the center of the "diurnal bulge." (See refs. 35 and 40.) At this point, the temperature is about 40 percent higher than that at the point of minimum, in the dark hemisphere. Although the decrease in temperature from the center of the diurnal bulge outward is almost certainly not axially symmetric, a good approximation can be obtained by assuming that it is. If  $T_N$  denotes the minimum nighttime temperature, the temperature  $T$  at an angular distance  $\psi'$  from the center of the bulge can be represented by

$$T = T_N \left( 1 + 0.4 \cos^n \frac{\psi'}{2} \right) \quad (4 < n < 6) \quad \text{II.2.3-(1)}$$

Because of the periodic change in latitude of the subsolar point, the day-to-night variation at any single point on the globe is dependent on the season. This seasonal effect, however, is automatically accounted for by equation II.2.3-(1).

*Extreme ultraviolet flux.*—The variations mentioned in the section *Causes of variations*, category (b), are generally erratic, although the 27-day period of the solar rotation can often be recognized in them over extended intervals (ref. 41). Among the various solar parameters, a good and quickly available index is the decimetric flux from the sun (refs. 36 and 42), which apparently varies in the same general manner as the extreme ultraviolet solar emission. Under constraints of time intervals of a few months, it is found that variations  $\Delta_1 T_N$  in the nighttime temperature are proportional to variations  $\Delta F_{10}$  in the daily means  $F_{10}$  of the 10.7-cm solar flux measured by the National Research Council, Ottawa, Canada. When  $F_{10}$  is expressed in units of  $10^{-22}$  watts m<sup>−2</sup>/(cycle sec<sup>−1</sup>), then

$$\Delta_1 T_N = 2.5 \Delta F_{10} \quad \text{II.2.3-(2)}$$

*Corpuscular effects.*—The corpuscular heating referred to under *Causes of variations*, category (c), manifests itself in a semiannual variation (refs. 43 and 44) superimposed on a slow fluctuation with the 11-year solar cycle (ref. 35). In addition, there are short-lived, spasmodic perturbations that parallel magnetic storms both in duration and intensity (ref. 45). The slow variations may be related to a "solar wind," which would provide a smooth background for the more violent corpuscular storms.

If the decimetric solar flux  $F_{10}$  is smoothed by taking monthly means, a variation is obtained which correlates with the 11-year solar cycle. It is thus not a simple matter to separate the ultraviolet and the slow-varying corpuscular components of atmospheric heating over time intervals even as long as 1 or 2 years. On the other hand, since the form of the 11-year variation in the corpuscular heating is not sufficiently well known, the decimetric flux again appears to be a convenient parameter for representing this variation, provided it is used in the smoothed  $\bar{F}_{10}$  (monthly mean) form.

The semiannual oscillations have maxima around April 7 and October 7, in fair agreement with the semiannual oscillation in the geomagnetic indices  $K_p$ ,  $C_i$ , and  $u$ . (See refs. 46 to 48.) Their amplitude varies with the solar cycle and can also be expressed as a function of  $\bar{F}_{10}$ . For lack of better information it is assumed that the oscillation is a sinusoidal function of time.

The contribution of  $\Delta_2 T_N$  of the solar wind to the



heating of the nighttime atmosphere can thus be written

$$\Delta_2 T_N = 2\Delta \bar{F}_{10} + 0.5\bar{F}_{10} \cos \frac{2(t - \text{Apr. 7})}{365} \quad \text{II.2.3-(3)}$$

*Magnetically correlated effects.*—During magnetically perturbed days there seems to be a simultaneous increase in the temperature of the entire upper atmosphere proportional to the 3-hour geomagnetic index  $a_p$ , the coefficient of proportionality  $\Delta T/\Delta a_p$  being of the order of  $1.5^\circ$  or even higher. (See ref 34.) The contribution  $\Delta_3 T_N$  of corpuscular storms to the heating of the atmosphere can therefore be written as

$$\Delta_3 T_N = 1.5a_p \quad \text{II.2.3-(4)}$$

*Summary.*—In summary, the nighttime temperature (in  $^\circ\text{K}$ ) can be computed from  $F_{10}$ ,  $\bar{F}_{10}$ , and  $a_p$  as follows:

$$\begin{aligned} T_N &= \text{Constant} + \Delta_1 T_N + \Delta_2 T_N + \Delta_3 T_N \\ &= 1,025 + 2.5(F_{10} - 170) + 2.0(\bar{F}_{10} - 170) \\ &\quad + 0.5\bar{F}_{10} \cos \frac{2(t - \text{Apr. 7})}{365} + 1.5a_p \quad \text{II.2.3-(5)} \end{aligned}$$

The maximum daytime temperature can be taken as  $T_D = 1.4T_N$ , and the temperature  $T$  at intermediate points on the globe can be computed from equation II.2.3-(1).

Resulting density corrections can now be computed. Table II.2.3(b) gives these corrections to be applied to  $\log_{10}\rho$  for various temperatures. It is to be noted, of course, that all the equations for computing the temperature are empirical and based on parameters  $F_{10}$  and  $a_p$  that are indirect indicators of the true energy source. Only a crude approximation can thus be expected from their use. A difficulty in practical applications may be the inevitable delay in obtaining information about the solar and geomagnetic parameters. Some degree of approximation can be achieved by ignoring the short-lived fluctuations—that is, by assuming that  $a_p$  is close to zero and by replacing  $F_{10}$  with an extrapolated value of  $\bar{F}_{10}$  from the curve of monthly means.

## II.3 REPRESENTATIONS OF ATMOSPHERIC VARIABLES AS APPROXIMATE ANALYTIC FUNCTIONS OF ALTITUDE

For some applications of the standard atmosphere it is advantageous to have approximate representations of the density and other variables as analytic functions, in closed form, of the altitude. Such representations do not, for example, have the differentiability limitations induced by the polygonal form of the standard molecular-scale temperature profile. Furthermore, approximate finite mathematical formulas frequently afford a considerable advantage, for analytical and computational purposes, over the standard tables.

The method of approximate representation utilized in this section consists essentially of two parts. First, the molecular-scale temperature is approximated by a polynomial function of the geometric altitude; the criterion for this curve fit is that the integral of the squared error be a minimum. Second, this polynomial and a gravitational acceleration which is assumed to vary inversely as the square of the distance from the earth's center are used to integrate a form of the hydrostatic equation. As a result, the pressure and the density are obtained as analytic functions of the altitude. The approximate representations given here have been limited to the geometric altitude range of 0 to 200 km by considerations of accuracy and general utility.

The approximate polynomial expression for the molecular-scale temperature  $T_M$  is

$$T_M = a_0 + a_1 Z + a_2 Z^2 + \dots + a_n Z^n \quad \text{II.3-(1)}$$

where  $Z$  is the geometric altitude. The sets of coefficients  $a_0, a_1, a_2, \dots, a_n$  are given in table II.3(a) for several values of the polynomial degree  $n$ . Accuracy comparisons are shown graphically in figure II.3(a).

The representations of the pressure  $P$  and the density  $\rho$  through the equations

$$\frac{P}{P_0} = \exp\left(-\frac{M_0}{R^*} \int_0^Z \frac{g}{T_M} dZ\right) \quad \text{II.3-(2)}$$

$$\frac{\rho}{\rho_0} = \frac{T_0}{T_M} \exp\left(-\frac{M_0}{R^*} \int_0^Z \frac{g}{T_M} dZ\right) \quad \text{II.3-(3)}$$

TABLE II.2.3(b).—CORRECTIONS TO  $\log_{10}\rho$  FOR VARIOUS TOP-ATMOSPHERIC TEMPERATURES\*

Z, km	Correction for $T$ , $^\circ\text{K}$ , of—									
	800	900	1,000	1,100	1,200	1,300	1,500	1,700	1,900	2,100
200	-0.25	-0.14	-0.05	-0.02	-0.01	0.00	+0.01	+0.01	0.00	0.00
300	-0.62	-0.40	-0.22	-0.13	-0.06	0.00	+0.08	+0.13	+0.17	+0.20
400	-0.92	-0.61	-0.37	-0.22	-0.10	0.00	+0.15	+0.27	+0.35	+0.41
500	-1.16	-0.80	-0.50	-0.30	-0.14	0.00	+0.22	+0.37	+0.49	+0.57
600	-1.36	-0.97	-0.62	-0.37	-0.17	0.00	+0.27	+0.47	+0.62	+0.74
700	-1.40	-1.07	-0.72	-0.44	-0.21	0.00	+0.32	+0.56	+0.75	+0.89

\*Computed from Nicolet's 1961 model, reference 33.

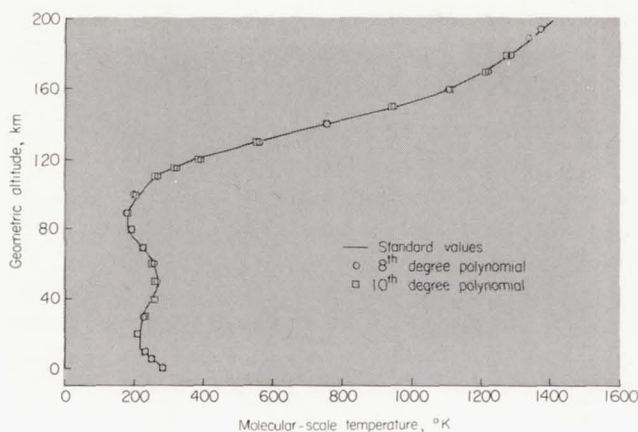


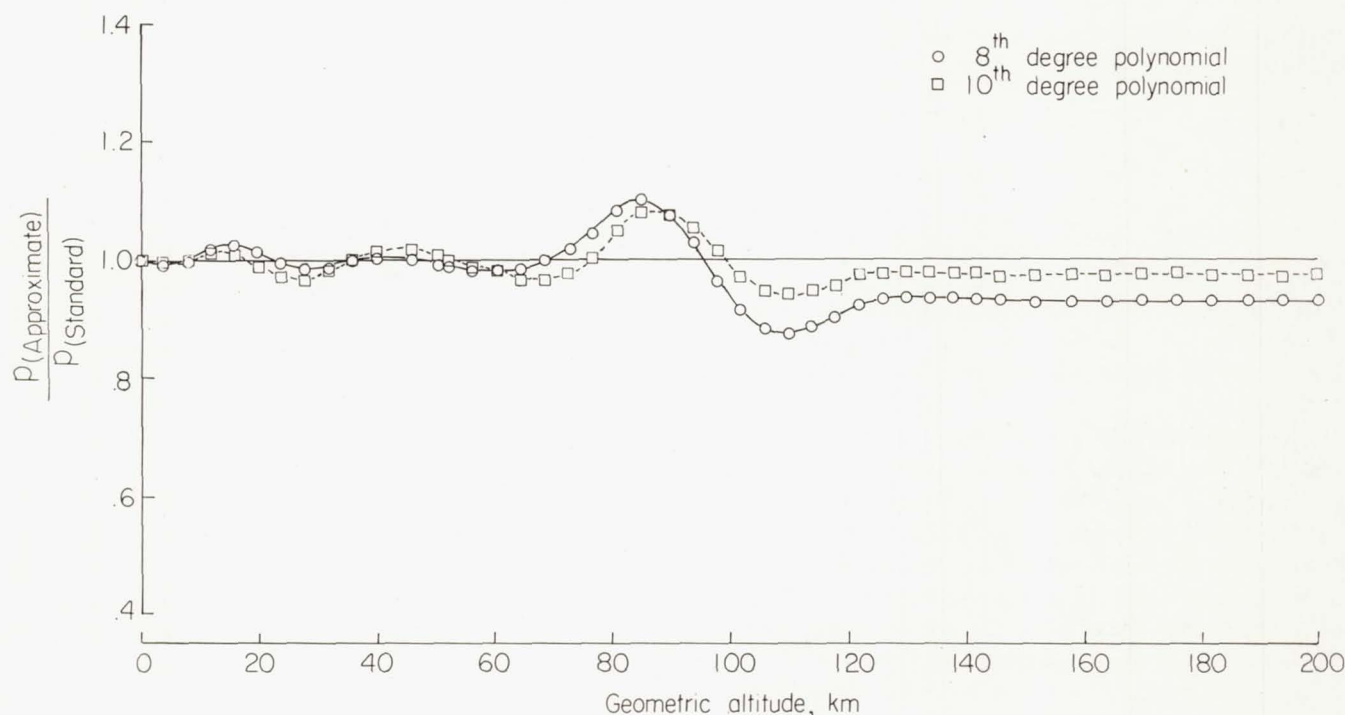
FIGURE II.3(a).—Comparison of polynomial values with standard values of  $T_M$ .

require approximate analytic expressions for the quantity

$$\frac{M_0}{R^*} \int_0^Z \frac{g}{T_M} dZ \quad \text{II.3-(4)}$$

These analytic expressions, for several values of  $n$ , are given in table II.3(b). Pressures and densities computed therefrom are compared graphically with the standard-atmosphere values in figures II.3(b) and II.3(c).

More accurate approximations to the standard atmosphere than those presented herein are clearly possible at the expense of the smoothness of change of the atmospheric variables with altitude, the simplicity of analytic expression, and the computational precision necessary.



FIGURES II.3(b).—Ratio of approximate pressure to standard pressure for various altitudes.



TABLE II.3(a).—DERIVED POLYNOMIAL COEFFICIENTS FOR POLYNOMIALS OF VARIOUS DEGREES

[Units: temperature, °K; length, km]

	Degree of polynomial, $n$					
	5	6	7	8	9	10
$a_0$	$2.158247286 \times 10^2$	$3.475660693 \times 10^2$	$3.048459828 \times 10^2$	$2.824793081 \times 10^2$	$3.023172383 \times 10^2$	$2.837492391 \times 10^2$
$a_1$	2.411481452	$-2.525420010 \times 10$	$-1.329257586 \times 10$	$-5.240572992$	$-1.416764159 \times 10$	$-3.955242007$
$a_2$	$2.074750035 \times 10^{-3}$	1.385358828	$5.779491911 \times 10^{-1}$	$-1.266010595 \times 10^{-1}$	$8.553764861 \times 10^{-1}$	$-5.232974573 \times 10^{-1}$
$a_3$	$-1.862934731 \times 10^{-3}$	$-2.952861629 \times 10^{-2}$	$-7.100570823 \times 10^{-3}$	$1.873293836 \times 10^{-2}$	$-2.709268043 \times 10^{-2}$	$5.256403630 \times 10^{-2}$
$a_4$	$2.292350448 \times 10^{-5}$	$2.822892690 \times 10^{-4}$	$-2.609635606 \times 10^{-5}$	$-5.104746533 \times 10^{-4}$	$6.065248048 \times 10^{-4}$	$-1.832962145 \times 10^{-3}$
$a_5$	$-6.651502204 \times 10^{-8}$	$-1.207724386 \times 10^{-6}$	$1.012652115 \times 10^{-6}$	$6.050186406 \times 10^{-6}$	$-9.587806007 \times 10^{-6}$	$3.432295909 \times 10^{-5}$
$a_6$		$1.902015607 \times 10^{-9}$	$-6.116010646 \times 10^{-9}$	$-3.550162735 \times 10^{-8}$	$9.481497610 \times 10^{-8}$	$-3.930824139 \times 10^{-7}$
$a_7$			$1.145432322 \times 10^{-11}$	$1.014102927 \times 10^{-10}$	$-5.368751119 \times 10^{-10}$	$2.848535349 \times 10^{-9}$
$a_8$				$-1.124449619 \times 10^{-13}$	$1.583000644 \times 10^{-12}$	$-1.269919974 \times 10^{-11}$
$a_9$					$-1.883828451 \times 10^{-15}$	$3.161762924 \times 10^{-14}$
$a_{10}$						$-3.350145769 \times 10^{-17}$

TABLE II.3(b).—EXPANSION IN PARTIAL FRACTIONS AND EVALUATION OF THE INTEGRAL

[Units: temperature, °K; length, km; time, sec]

For  $n=8$ , the expansion of  $\frac{g}{T_M}$  in partial fractions yields

$$\begin{aligned} \frac{g}{T_M} &= \frac{-3.5241442 \times 10^{18}}{(Z+6356.77)^2(Z+21.680485)(Z-284.01768)(Z^2-29.895060Z+924.13600)(Z^2-189.52010Z+9665.2950)(Z^2-420.11368Z+45,675.466)} \\ &= \frac{1.0902039 \times 10^{-7}}{(Z+6356.77)^2} + \frac{1.7870260 \times 10^{-4}}{(Z+21.680485)} - \frac{1.3949832 \times 10^{-5}}{(Z-284.01768)} + \frac{2.6655127 \times 10^{-4}Z+0.018031036}{(Z^2-29.895060Z+924.13600)} \\ &\quad - \frac{3.2004620 \times 10^{-4}Z-0.060803123}{(Z^2-189.52010Z+9665.2950)} - \frac{1.1125784 \times 10^{-4}Z-0.028429767}{(Z^2-420.11368Z+45,675.466)} \end{aligned}$$

For  $n=10$ , the expansion of  $\frac{g}{T_M}$  in partial fractions yields

$$\begin{aligned} \frac{g}{T_M} &= \frac{-1.1828508 \times 10^{22}}{(Z+6356.77)^2(Z+14.002385)(Z-216.23225)(Z^2-26.414270Z+684.10967)(Z^2-137.47450Z+10,533.544)(Z^2-193.32352Z+10,180.367)(Z^2-384.32662Z+38,131.516)} \\ &= \frac{2.5653341 \times 10^{-11}}{(Z+6356.77)} + \frac{1.4655396 \times 10^{-7}}{(Z+6356.77)^2} + \frac{1.4116834 \times 10^{-4}}{(Z+14.002385)} - \frac{3.8282910 \times 10^{-5}}{(Z-216.23225)} + \frac{3.0169957 \times 10^{-4}Z+0.011236207}{(Z^2-26.414270Z+684.10967)} \\ &\quad + \frac{1.7103935 \times 10^{-4}Z-0.0079564316}{(Z^2-137.47450Z+10,533.544)} - \frac{5.0784709 \times 10^{-4}Z-0.083577870}{(Z^2-193.32352Z+10,180.367)} - \frac{6.7777209 \times 10^{-5}Z-0.016141673}{(Z^2-384.32662Z+38,131.516)} \end{aligned}$$

For  $n=8$ , the integration of  $\frac{g}{T_M}$  yields

$$\begin{aligned} \int_0^Z \frac{g}{T_M} dZ &= -1.0902039 \times 10^{-7} \left[ \frac{1}{Z+6356.77} \right]_0^Z + 1.7870260 \times 10^{-4} [\log_e (Z+21.680485)]_0^Z - 1.3949832 \times 10^{-5} [\log_e (Z-284.01768)]_0^Z \\ &\quad + 1.3327563 \times 10^{-4} [\log_e (Z^2-29.895060Z+924.13600)]_0^Z + 8.3168074 \times 10^{-4} [\tan^{-1} (0.037777365Z-0.56467830)]_0^Z - 1.6002310 \times 10^{-4} [\log_e (Z^2-189.52010Z+9665.295)]_0^Z \\ &\quad + 1.1637071 \times 10^{-3} [\tan^{-1} (0.038184967Z-3.6184094)]_0^Z - 5.5628920 \times 10^{-5} [\log_e (Z^2-420.11368Z+45,675.466)]_0^Z + 1.2844040 \times 10^{-4} [\tan^{-1} (0.025387008Z-5.3327146)]_0^Z \end{aligned}$$

For  $n=10$ , the integration of  $\frac{g}{T_M}$  yields

$$\begin{aligned} \int_0^Z \frac{g}{T_M} dZ &= -1.4655396 \times 10^{-7} \left[ \frac{1}{Z+6356.77} \right]_0^Z + 2.5653341 \times 10^{-11} [\log_e (Z+6356.77)]_0^Z + 1.4116834 \times 10^{-4} [\log_e (Z+14.002385)]_0^Z \\ &\quad - 3.8282910 \times 10^{-5} [\log_e (Z-216.23225)]_0^Z + 1.5084978 \times 10^{-4} [\log_e (Z^2-26.414270Z+684.10967)]_0^Z + 6.7419880 \times 10^{-4} [\tan^{-1} (0.044294588Z-0.58500460)]_0^Z \\ &\quad + 8.5519675 \times 10^{-5} [\log_e (Z^2-137.47450Z+10,533.544)]_0^Z + 4.9863416 \times 10^{-5} [\tan^{-1} (0.013120767Z-0.90188546)]_0^Z - 2.5392354 \times 10^{-4} [\log_e (Z^2-193.32352Z+10,180.367)]_0^Z \\ &\quad + 1.1921879 \times 10^{-3} [\tan^{-1} (0.034567717Z-3.3413764)]_0^Z - 3.3888604 \times 10^{-5} [\log_e (Z^2-384.32662Z+38,131.516)]_0^Z + 8.9812379 \times 10^{-5} [\tan^{-1} (0.028810210Z-5.5362654)]_0^Z \end{aligned}$$



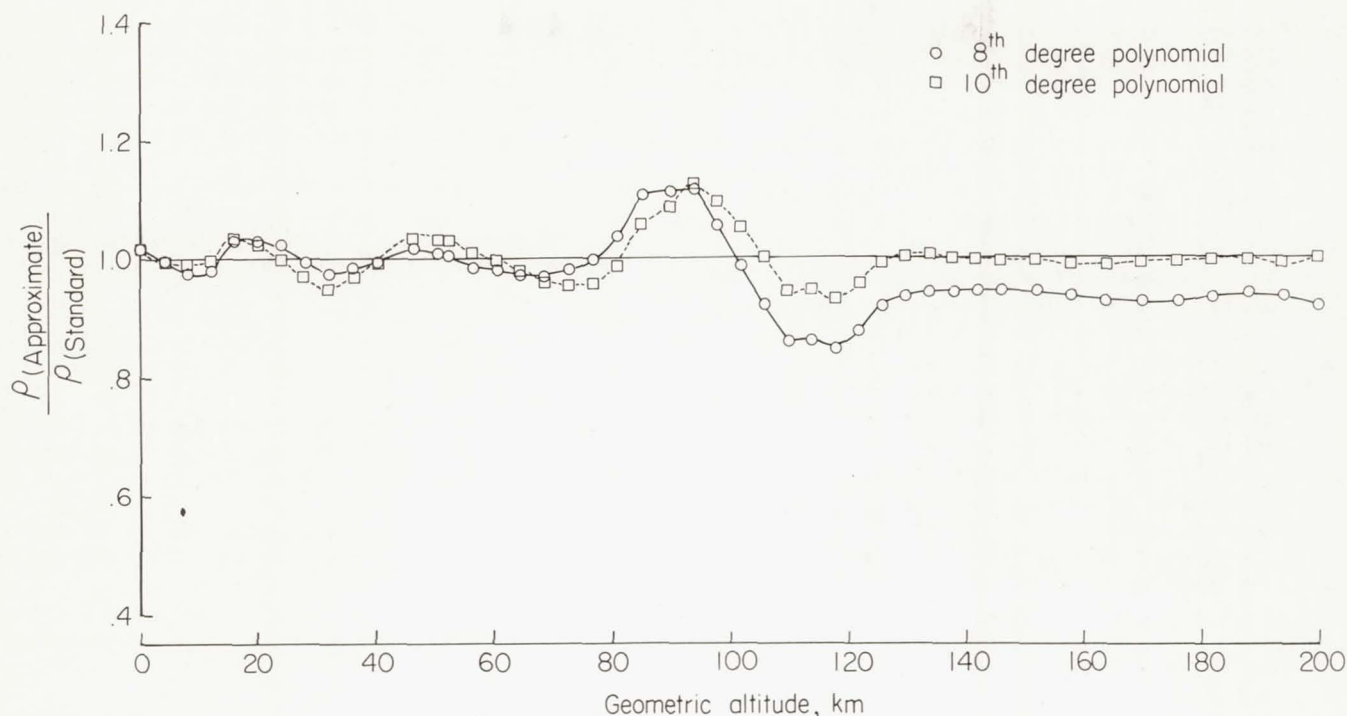


FIGURE II.3(c).—Ratio of approximate density to standard density for various altitudes.

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### PART III

## The Tables



## PART III

# The Tables

The main tables, contained in Part III of this document, have been computed by using the constants, conversion factors, and equations developed and discussed in Part I. Computation has been accomplished by means of electronic digital computers with selected check points validated by computation on a different machine. The automatic print-out from the machines has been directly reproduced here by a photographic process. Thus, every precaution possible has been taken to eliminate both computational errors and errors of transcription.

The tables are arranged in two principal categories:

Atmospheric properties as a function of altitude, metric units

Atmospheric properties as a function of altitude, English units

It is to be emphasized that on *left-hand* pages entry is made in terms of *geopotential* altitude. On *right-hand* pages the same quantities appear in terms of *geometric* altitude. This arrangement is followed to an altitude of 90 km. Above this altitude all entries are made in terms of *geometric* altitude only.

A secondary category of the main tables presents pressure as a function of altitude in various units.

For added convenience, the contents of Part III are repeated here:

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Table	Page
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TABLE I  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-5000	-4996	320.650	47.500	320.650	1.77687 + 3	1.33276 + 3	1.75363 + 0	1.9305 + 0	1.5759 + 0
-4950	-4946	320.325	47.175	320.325	1.76743	1.32568	1.74431	1.9222	1.5691
-4900	-4896	320.000	46.850	320.000	1.75802	1.31862	1.73503	1.9139	1.5623
-4850	-4846	319.675	46.525	319.675	1.74866	1.31160	1.72579	1.9056	1.5556
-4800	-4796	319.350	46.200	319.350	1.73933	1.30461	1.71659	1.8974	1.5489
-4750	-4746	319.025	45.875	319.025	1.73005	1.29764	1.70743	1.8892	1.5422
-4700	-4697	318.700	45.550	318.700	1.72081	1.29071	1.69830	1.8810	1.5355
-4650	-4647	318.375	45.225	318.375	1.71160	1.28381	1.68922	1.8728	1.5289
-4600	-4597	318.050	44.900	318.050	1.70244	1.27693	1.68018	1.8647	1.5222
-4550	-4547	317.725	44.575	317.725	1.69332	1.27009	1.67117	1.8566	1.5156
-4500	-4497	317.400	44.250	317.400	1.68423 + 3	1.26328 + 3	1.66221 + 0	1.8486 + 0	1.5090 + 0
-4450	-4447	317.075	43.925	317.075	1.67519	1.25649	1.65328	1.8405	1.5025
-4400	-4397	316.750	43.600	316.750	1.66618	1.24974	1.64439	1.8325	1.4959
-4350	-4347	316.425	43.275	316.425	1.65722	1.24302	1.63555	1.8245	1.4894
-4300	-4297	316.100	42.950	316.100	1.64829	1.23632	1.62674	1.8166	1.4829
-4250	-4247	315.775	42.625	315.775	1.63940	1.22965	1.61796	1.8086	1.4764
-4200	-4197	315.450	42.300	315.450	1.63055	1.22302	1.60923	1.8007	1.4700
-4150	-4147	315.125	41.975	315.125	1.62174	1.21641	1.60054	1.7928	1.4635
-4100	-4097	314.800	41.650	314.800	1.61297	1.20983	1.59188	1.7850	1.4571
-4050	-4047	314.475	41.325	314.475	1.60424	1.20328	1.58326	1.7771	1.4507
-4000	-3997	314.150	41.000	314.150	1.59554 + 3	1.19676 + 3	1.57468 + 0	1.7693 + 0	1.4444 + 0
-3950	-3948	313.825	40.675	313.825	1.58689	1.19026	1.56614	1.7616	1.4380
-3900	-3898	313.500	40.350	313.500	1.57827	1.18380	1.55763	1.7538	1.4317
-3850	-3848	313.175	40.025	313.175	1.56969	1.17736	1.54916	1.7461	1.4254
-3800	-3798	312.850	39.700	312.850	1.56115	1.17096	1.54073	1.7384	1.4191
-3750	-3748	312.525	39.375	312.525	1.55264	1.16458	1.53234	1.7307	1.4128
-3700	-3698	312.200	39.050	312.200	1.54417	1.15823	1.52398	1.7231	1.4066
-3650	-3648	311.875	38.725	311.875	1.53574	1.15190	1.51566	1.7154	1.4004
-3600	-3598	311.550	38.400	311.550	1.52735	1.14561	1.50738	1.7078	1.3942
-3550	-3548	311.225	38.075	311.225	1.51900	1.13934	1.49913	1.7003	1.3880
-3500	-3498	310.900	37.750	310.900	1.51068 + 3	1.13310 + 3	1.49092 + 0	1.6927 + 0	1.3818 + 0
-3450	-3448	310.575	37.425	310.575	1.50240	1.12689	1.48275	1.6852	1.3757
-3400	-3398	310.250	37.100	310.250	1.49415	1.12071	1.47461	1.6777	1.3696
-3350	-3348	309.925	36.775	309.925	1.48594	1.11455	1.46651	1.6703	1.3635
-3300	-3298	309.600	36.450	309.600	1.47777	1.10842	1.45845	1.6628	1.3574
-3250	-3248	309.275	36.125	309.275	1.46964	1.10232	1.45042	1.6554	1.3513
-3200	-3198	308.950	35.800	308.950	1.46154	1.09624	1.44242	1.6480	1.3453
-3150	-3148	308.625	35.475	308.625	1.45347	1.09020	1.43447	1.6406	1.3393
-3100	-3098	308.300	35.150	308.300	1.44545	1.08417	1.42655	1.6333	1.3333
-3050	-3049	307.975	34.825	307.975	1.43746	1.07818	1.41866	1.6260	1.3273
-3000	-2999	307.650	34.500	307.650	1.42950 + 3	1.07221 + 3	1.41081 + 0	1.6187 + 0	1.3214 + 0
-2950	-2949	307.325	34.175	307.325	1.42158	1.06627	1.40299	1.6114	1.3155
-2900	-2899	307.000	33.850	307.000	1.41370	1.06036	1.39521	1.6042	1.3095
-2850	-2849	306.675	33.525	306.675	1.40585	1.05448	1.38747	1.5970	1.3037
-2800	-2799	306.350	33.200	306.350	1.39804	1.04861	1.37976	1.5898	1.2978
-2750	-2749	306.025	32.875	306.025	1.39026	1.04278	1.37208	1.5826	1.2919
-2700	-2699	305.700	32.550	305.700	1.38252	1.03697	1.36444	1.5755	1.2861
-2650	-2649	305.375	32.225	305.375	1.37481	1.03119	1.35683	1.5684	1.2803
-2600	-2599	305.050	31.900	305.050	1.36714	1.02544	1.34926	1.5613	1.2745
-2550	-2549	304.725	31.575	304.725	1.35950	1.01971	1.34172	1.5542	1.2687
-2500	-2499	304.400	31.250	304.400	1.35190 + 3	1.01401 + 3	1.33422 + 0	1.5472 + 0	1.2630 + 0
-2450	-2449	304.075	30.925	304.075	1.34433	1.00833	1.32675	1.5401	1.2573
-2400	-2399	303.750	30.600	303.750	1.33679	1.00268	1.31931	1.5332	1.2516
-2350	-2349	303.425	30.275	303.425	1.32929	9.97051 + 2	1.31191	1.5262	1.2459
-2300	-2299	303.100	29.950	303.100	1.32183	9.91451	1.30454	1.5192	1.2402
-2250	-2249	302.775	29.625	302.775	1.31439	9.85876	1.29721	1.5123	1.2345
-2200	-2199	302.450	29.300	302.450	1.30699	9.80327	1.28990	1.5054	1.2289
-2150	-2149	302.125	28.975	302.125	1.29963	9.74802	1.28263	1.4986	1.2233
-2100	-2099	301.800	28.650	301.800	1.29230	9.69304	1.27540	1.4917	1.2177
-2050	-2049	301.475	28.325	301.475	1.28500	9.63830	1.26820	1.4849	1.2121
-2000	-1999	301.150	28.000	301.150	1.27774 + 3	9.58382 + 2	1.26103 + 0	1.4781 + 0	1.2066 + 0
-1950	-1949	300.825	27.675	300.825	1.27051	9.52958	1.25389	1.4713	1.2011
-1900	-1899	300.500	27.350	300.500	1.26331	9.47559	1.24679	1.4645	1.1955
-1850	-1849	300.175	27.025	300.175	1.25614	9.42185	1.23972	1.4578	1.1901
-1800	-1799	299.850	26.700	299.850	1.24901	9.36836	1.23268	1.4511	1.1846
-1750	-1750	299.525	26.375	299.525	1.24191	9.31512	1.22567	1.4444	1.1791
-1700	-1700	299.200	26.050	299.200	1.23485	9.26212	1.21870	1.4378	1.1737
-1650	-1650	298.875	25.725	298.875	1.22781	9.20936	1.21176	1.4311	1.1683
-1600	-1600	298.550	25.400	298.550	1.22081	9.15685	1.20485	1.4245	1.1629
-1550	-1550	298.225	25.075	298.225	1.21384	9.10458	1.19797	1.4179	1.1575
-1500	-1500	297.900	24.750	297.900	1.20691 + 3	9.05255 + 2	1.19112 + 0	1.4114 + 0	1.1521 + 0
-1450	-1450	297.575	24.425	297.575	1.20000	9.00076	1.18431	1.4048	1.1468
-1400	-1400	297.250	24.100	297.250	1.19313	8.94921	1.17753	1.3983	1.1415
-1350	-1350	296.925	23.775	296.925	1.18629	8.89791	1.17078	1.3918	1.1362
-1300	-1300	296.600	23.450	296.600	1.17948	8.84684	1.16406	1.3853	1.1309
-1250	-1250	296.275	23.125	296.275	1.17270	8.79601	1.15737	1.3789	1.1256
-1200	-1200	295.950	22.800	295.950	1.16596	8.74541	1.15071	1.3725	1.1204
-1150	-1150	295.625	22.475	295.625	1.15925	8.69505	1.14409	1.3661	1.1152
-1100	-1100	295.300	22.150	295.300	1.15256	8.64493	1.13749	1.3597	1.1099
-1050	-1050	294.975	21.825	294.975	1.14591	8.59504	1.13093	1.3533	1.1048



Table I  
TEMPERATURE, PRESSURE, AND DENSITY  
Metric Units

NOTE: A one- or two-digit number (preceded by a plus or minus sign) following the initial entry of each block indicates the power of ten by which that entry and each succeeding entry of that block should be multiplied. A change of power occurring within a block is indicated by a similar notation.

TABLE I

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-5000	-5004	320.676	47.526	320.676	1.77762 + 3	1.33332 + 3	1.75437 + 0	1.9311 + 0	1.5764 + 0
-4950	-4954	320.350	47.200	320.350	1.76815	1.32622	1.74503	1.9228	1.5696
-4900	-4904	320.025	46.875	320.025	1.75873	1.31916	1.73573	1.9145	1.5629
-4850	-4854	319.699	46.549	319.699	1.74935	1.31212	1.72647	1.9062	1.5561
-4800	-4804	319.374	46.224	319.374	1.74001	1.30511	1.71725	1.8980	1.5494
-4750	-4754	319.048	45.898	319.048	1.73071	1.29814	1.70808	1.8898	1.5427
-4700	-4703	318.723	45.573	318.723	1.72145	1.29119	1.69894	1.8816	1.5360
-4650	-4653	318.397	45.247	318.397	1.71223	1.28428	1.68984	1.8734	1.5293
-4600	-4603	318.072	44.922	318.072	1.70305	1.27739	1.68078	1.8653	1.5227
-4550	-4553	317.746	44.596	317.746	1.69391	1.27054	1.67176	1.8572	1.5160
-4500	-4503	317.421	44.271	317.421	1.68481 + 3	1.26371 + 3	1.66278 + 0	1.8491 + 0	1.5094 + 0
-4450	-4453	317.095	43.945	317.095	1.67575	1.25692	1.65384	1.8410	1.5029
-4400	-4403	316.770	43.620	316.770	1.66673	1.25015	1.64494	1.8330	1.4963
-4350	-4353	316.444	43.294	316.444	1.65775	1.24342	1.63607	1.8250	1.4898
-4300	-4303	316.119	42.969	316.119	1.64881	1.23671	1.62725	1.8170	1.4833
-4250	-4253	315.793	42.643	315.793	1.63991	1.23003	1.61846	1.8091	1.4768
-4200	-4203	315.468	42.318	315.468	1.63104	1.22338	1.60972	1.8011	1.4703
-4150	-4153	315.143	41.993	315.143	1.62222	1.21677	1.60101	1.7933	1.4639
-4100	-4103	314.817	41.667	314.817	1.61344	1.21018	1.59234	1.7854	1.4575
-4050	-4053	314.492	41.342	314.492	1.60469	1.20362	1.58371	1.7775	1.4511
-4000	-4003	314.166	41.016	314.166	1.59598 + 3	1.19708 + 3	1.57511 + 0	1.7697 + 0	1.4447 + 0
-3950	-3952	313.841	40.691	313.841	1.58731	1.19058	1.56656	1.7619	1.4383
-3900	-3902	313.516	40.366	313.516	1.57868	1.18411	1.55804	1.7542	1.4320
-3850	-3852	313.190	40.040	313.190	1.57009	1.17766	1.54956	1.7464	1.4257
-3800	-3802	312.865	39.715	312.865	1.56153	1.17125	1.54111	1.7387	1.4194
-3750	-3752	312.539	39.389	312.539	1.55302	1.16486	1.53271	1.7311	1.4131
-3700	-3702	312.214	39.064	312.214	1.54454	1.15850	1.52434	1.7234	1.4069
-3650	-3652	311.889	38.739	311.889	1.53610	1.15217	1.51601	1.7158	1.4006
-3600	-3602	311.563	38.413	311.563	1.52769	1.14586	1.50772	1.7082	1.3944
-3550	-3552	311.238	38.088	311.238	1.51933	1.13959	1.49946	1.7006	1.3882
-3500	-3502	310.913	37.763	310.913	1.51100 + 3	1.13334 + 3	1.49124 + 0	1.6930 + 0	1.3821 + 0
-3450	-3452	310.587	37.437	310.587	1.50271	1.12712	1.48305	1.6855	1.3759
-3400	-3402	310.262	37.112	310.262	1.49445	1.12093	1.47491	1.6780	1.3698
-3350	-3352	309.936	36.786	309.936	1.48623	1.11477	1.46680	1.6705	1.3637
-3300	-3302	309.611	36.461	309.611	1.47805	1.10863	1.45872	1.6631	1.3576
-3250	-3252	309.286	36.136	309.286	1.46991	1.10252	1.45068	1.6556	1.3515
-3200	-3202	308.960	35.810	308.960	1.46180	1.09644	1.44268	1.6482	1.3455
-3150	-3152	308.635	35.485	308.635	1.45373	1.09038	1.43472	1.6409	1.3395
-3100	-3102	308.310	35.160	308.310	1.44569	1.08436	1.42679	1.6335	1.3335
-3050	-3051	307.985	34.835	307.985	1.43769	1.07836	1.41889	1.6262	1.3275
-3000	-3001	307.659	34.509	307.659	1.42973 + 3	1.07238 + 3	1.41103 + 0	1.6189 + 0	1.3216 + 0
-2950	-2951	307.334	34.184	307.334	1.42180	1.06644	1.40321	1.6116	1.3156
-2900	-2901	307.009	33.859	307.009	1.41391	1.06052	1.39542	1.6044	1.3097
-2850	-2851	306.683	33.533	306.683	1.40605	1.05463	1.38766	1.5972	1.3038
-2800	-2801	306.358	33.208	306.358	1.39823	1.04876	1.37995	1.5900	1.2979
-2750	-2751	306.033	32.883	306.033	1.39045	1.04292	1.37226	1.5828	1.2921
-2700	-2701	305.707	32.557	305.707	1.38270	1.03711	1.36461	1.5756	1.2862
-2650	-2651	305.382	32.232	305.382	1.37498	1.03132	1.35700	1.5685	1.2804
-2600	-2601	305.057	31.907	305.057	1.36730	1.02556	1.34942	1.5614	1.2746
-2550	-2551	304.732	31.582	304.732	1.35966	1.01983	1.34188	1.5544	1.2689
-2500	-2501	304.406	31.256	304.406	1.35205 + 3	1.01412 + 3	1.33436 + 0	1.5473 + 0	1.2631 + 0
-2450	-2451	304.081	30.931	304.081	1.34447	1.00844	1.32689	1.5403	1.2574
-2400	-2401	303.756	30.606	303.756	1.33693	1.00278	1.31945	1.5333	1.2517
-2350	-2351	303.431	30.281	303.431	1.32942	9.97148 + 2	1.31204	1.5263	1.2460
-2300	-2301	303.105	29.955	303.105	1.32195	9.91544	1.30466	1.5194	1.2403
-2250	-2251	302.780	29.630	302.780	1.31451	9.85964	1.29732	1.5124	1.2346
-2200	-2201	302.455	29.305	302.455	1.30711	9.80411	1.29001	1.5055	1.2290
-2150	-2151	302.130	28.980	302.130	1.29974	9.74883	1.28274	1.4987	1.2234
-2100	-2101	301.805	28.655	301.805	1.29240	9.69380	1.27550	1.4918	1.2178
-2050	-2051	301.479	28.329	301.479	1.28510	9.63902	1.26829	1.4850	1.2122
-2000	-2001	301.154	28.004	301.154	1.27783 + 3	9.58450 + 2	1.26112 + 0	1.4782 + 0	1.2067 + 0
-1950	-1951	300.829	27.679	300.829	1.27059	9.53023	1.25398	1.4714	1.2011
-1900	-1901	300.504	27.354	300.504	1.26339	9.47621	1.24687	1.4646	1.1956
-1850	-1851	300.178	27.028	300.178	1.25622	9.42243	1.23979	1.4579	1.1901
-1800	-1801	299.853	26.703	299.853	1.24908	9.36891	1.23275	1.4512	1.1846
-1750	-1750	299.528	26.378	299.528	1.24198	9.31563	1.22574	1.4445	1.1792
-1700	-1700	299.203	26.053	299.203	1.23491	9.26260	1.21876	1.4378	1.1737
-1650	-1650	298.878	25.728	298.878	1.22787	9.20981	1.21182	1.4312	1.1683
-1600	-1600	298.553	25.403	298.553	1.22087	9.15727	1.20490	1.4246	1.1629
-1550	-1550	298.227	25.077	298.227	1.21390	9.10497	1.19802	1.4180	1.1575
-1500	-1500	297.902	24.752	297.902	1.20696 + 3	9.05291 + 2	1.19117 + 0	1.4114 + 0	1.1522 + 0
-1450	-1450	297.577	24.427	297.577	1.20005	9.00110	1.18436	1.4049	1.1468
-1400	-1400	297.252	24.102	297.252	1.19317	8.94953	1.17757	1.3984	1.1415
-1350	-1350	296.927	23.777	296.927	1.18633	8.89820	1.17082	1.3919	1.1362
-1300	-1300	296.602	23.452	296.602	1.17952	8.84711	1.16409	1.3854	1.1309
-1250	-1250	296.277	23.127	296.277	1.17274	8.79626	1.15740	1.3789	1.1257
-1200	-1200	295.951	22.801	295.951	1.16599	8.74564	1.15074	1.3725	1.1204
-1150	-1150	295.626	22.476	295.626	1.15927	8.69526	1.14411	1.3661	1.1152
-1100	-1100	295.301	22.151	295.301	1.15259	8.64512	1.13752	1.3597	1.1100
-1050	-1050	294.976	21.826	294.976	1.14593	8.59521	1.13095	1.3534	1.1048



TABLE I. — Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho, \text{kg m}^{-3}$	$\frac{\rho}{\rho_0}$
-1000	-1000	294.650	21.500	294.650	1.13929 + 3	8.54538 + 2	1.12439 + 0	1.3470 + 0	1.0996 + 0
-950	-950	294.325	21.175	294.325	1.13270	8.49596	1.11789	1.3407	1.0944
-900	-900	294.000	20.850	294.000	1.12614	8.44677	1.11142	1.3344	1.0893
-850	-850	293.675	20.525	293.675	1.11962	8.39781	1.10497	1.3281	1.0842
-800	-800	293.350	20.200	293.350	1.11312	8.34908	1.09856	1.3219	1.0791
-750	-750	293.025	19.875	293.025	1.10665	8.30057	1.09218	1.3157	1.0740
-700	-700	292.700	19.550	292.700	1.10022	8.25230	1.08583	1.3095	1.0690
-650	-650	292.375	19.225	292.375	1.09381	8.20425	1.07951	1.3033	1.0639
-600	-600	292.050	18.900	292.050	1.08744	8.15644	1.07322	1.2971	1.0589
-550	-550	291.725	18.575	291.725	1.08109	8.10884	1.06695	1.2910	1.0539
-500	-500	291.400	18.250	291.400	1.07477 + 3	8.06147 + 2	1.06072 + 0	1.2849 + 0	1.0489 + 0
-450	-450	291.075	17.925	291.075	1.06849	8.01433	1.05452	1.2788	1.0439
-400	-400	290.750	17.600	290.750	1.06223	7.96741	1.04834	1.2727	1.0390
-350	-350	290.425	17.275	290.425	1.05601	7.92071	1.04220	1.2667	1.0340
-300	-300	290.100	16.950	290.100	1.04981	7.87424	1.03608	1.2607	1.0291
-250	-250	289.775	16.625	289.775	1.04365	7.82798	1.03000	1.2547	1.0242
-200	-200	289.450	16.300	289.450	1.03751	7.78195	1.02394	1.2487	1.0193
-150	-150	289.125	15.975	289.125	1.03140	7.73613	1.01791	1.2427	1.0145
-100	-100	288.800	15.650	288.800	1.02532	7.69054	1.01191	1.2368	1.0096
-50	-50	288.475	15.325	288.475	1.01927	7.64516	1.00594	1.2309	1.0048
0	0	288.150	15.000	288.150	1.01325 + 3	7.60000 + 2	1.00000 + 0	1.2250 + 0	1.0000 + 0
50	50	287.825	14.675	287.825	1.00726	7.55505	9.94086 - 1	1.2191	9.9521 - 1
100	100	287.500	14.350	287.500	1.00129	7.51032	9.88200	1.2133	9.9044
150	150	287.175	14.025	287.175	9.95359 + 2	7.46581	9.82343	1.2075	9.8568
200	200	286.850	13.700	286.850	9.89453	7.42151	9.76514	1.2017	9.8094
250	250	286.525	13.375	286.525	9.83575	7.37742	9.70713	1.1959	9.7622
300	300	286.200	13.050	286.200	9.77725	7.33354	9.64940	1.1901	9.7151
350	350	285.875	12.725	285.875	9.71904	7.28988	9.59195	1.1844	9.6683
400	400	285.550	12.400	285.550	9.66111	7.24643	9.53477	1.1786	9.6216
450	450	285.225	12.075	285.225	9.60345	7.20318	9.47787	1.1729	9.5751
500	500	284.900	11.750	284.900	9.54608 + 2	7.16015 + 2	9.42125 - 1	1.1673 + 0	9.5287 - 1
550	550	284.575	11.425	284.575	9.48898	7.11732	9.36490	1.1616	9.4826
600	600	284.250	11.100	284.250	9.43216	7.07470	9.30882	1.1560	9.4365
650	650	283.925	10.775	283.925	9.37562	7.03229	9.25302	1.1504	9.3907
700	700	283.600	10.450	283.600	9.31935	6.99009	9.19749	1.1448	9.3451
750	750	283.275	10.125	283.275	9.26336	6.94809	9.14222	1.1392	9.2996
800	800	282.950	9.800	282.950	9.20763	6.90629	9.08723	1.1336	9.2542
850	850	282.625	9.475	282.625	9.15218	6.86470	9.03250	1.1281	9.2091
900	900	282.300	9.150	282.300	9.09700	6.82331	8.97805	1.1226	9.1641
950	950	281.975	8.825	281.975	9.04209	6.78213	8.92385	1.1171	9.1193
1000	1000	281.650	8.500	281.650	8.98745 + 2	6.74114 + 2	8.86993 - 1	1.1116 + 0	9.0746 - 1
1050	1050	281.325	8.175	281.325	8.93308	6.70036	8.81626	1.1062	9.0302
1100	1100	281.000	7.850	281.000	8.87897	6.65978	8.76286	1.1008	8.9858
1150	1150	280.675	7.525	280.675	8.82513	6.61939	8.70973	1.0954	8.9417
1200	1200	280.350	7.200	280.350	8.77155	6.57921	8.65685	1.0900	8.8977
1250	1250	280.025	6.875	280.025	8.71824	6.53922	8.60423	1.0846	8.8539
1300	1300	279.700	6.550	279.700	8.66519	6.49943	8.55188	1.0793	8.8102
1350	1350	279.375	6.225	279.375	8.61240	6.45983	8.49978	1.0739	8.7668
1400	1400	279.050	5.900	279.050	8.55987	6.42043	8.44794	1.0686	8.7234
1450	1450	278.725	5.575	278.725	8.50761	6.38123	8.39635	1.0633	8.6803
1500	1500	278.400	5.250	278.400	8.45560 + 2	6.34222 + 2	8.34502 - 1	1.0581 + 0	8.6373 - 1
1550	1550	278.075	4.925	278.075	8.40384	6.30340	8.29395	1.0528	8.5945
1600	1600	277.750	4.600	277.750	8.35235	6.26478	8.24313	1.0476	8.5518
1650	1650	277.425	4.275	277.425	8.30111	6.22634	8.19256	1.0424	8.5093
1700	1700	277.100	3.950	277.100	8.25013	6.18810	8.14224	1.0372	8.4669
1750	1750	276.775	3.625	276.775	8.19939	6.15005	8.09217	1.0320	8.4248
1800	1801	276.450	3.300	276.450	8.14892	6.11219	8.04236	1.0269	8.3827
1850	1851	276.125	2.975	276.125	8.09869	6.07452	7.99279	1.0218	8.3409
1900	1901	275.800	2.650	275.800	8.04872	6.03703	7.94347	1.0166	8.2992
1950	1951	275.475	2.325	275.475	7.99899	5.99974	7.89439	1.0116	8.2576
2000	2001	275.150	2.000	275.150	7.94952 + 2	5.96263 + 2	7.84556 - 1	1.0065 + 0	8.2162 - 1
2050	2051	274.825	1.675	274.825	7.90029	5.92570	7.79698	1.0014	8.1750
2100	2101	274.500	1.350	274.500	7.85131	5.88897	7.74864	9.9641 - 1	8.1340
2150	2151	274.175	1.025	274.175	7.80257	5.85241	7.70054	9.9140	8.0930
2200	2201	273.850	0.700	273.850	7.75409	5.81604	7.65269	9.8641	8.0523
2250	2251	273.525	0.375	273.525	7.70584	5.77986	7.60507	9.8143	8.0117
2300	2301	273.200	0.050	273.200	7.65784	5.74385	7.55770	9.7648	7.9713
2350	2351	272.875	-0.275	272.875	7.61008	5.70803	7.51057	9.7155	7.9310
2400	2401	272.550	-0.600	272.550	7.56256	5.67239	7.46367	9.6663	7.8909
2450	2451	272.225	-0.925	272.225	7.51529	5.63693	7.41701	9.6174	7.8509
2500	2501	271.900	-1.250	271.900	7.46825 + 2	5.60165 + 2	7.37059 - 1	9.5686 - 1	7.8111 - 1
2550	2551	271.575	-1.575	271.575	7.42145	5.56655	7.32440	9.5200	7.7714
2600	2601	271.250	-1.900	271.250	7.37489	5.53162	7.27845	9.4716	7.7319
2650	2651	270.925	-2.225	270.925	7.32856	5.49688	7.23273	9.4234	7.6926
2700	2701	270.600	-2.550	270.600	7.28248	5.46231	7.18725	9.3754	7.6534
2750	2751	270.275	-2.875	270.275	7.23662	5.42791	7.14199	9.3276	7.6143
2800	2801	269.950	-3.200	269.950	7.19100	5.39370	7.09697	9.2799	7.5754
2850	2851	269.625	-3.525	269.625	7.14562	5.35965	7.05218	9.2325	7.5367
2900	2901	269.300	-3.850	269.300	7.10046	5.32579	7.00761	9.1852	7.4981
2950	2951	268.975	-4.175	268.975	7.05554	5.29209	6.96328	9.1381	7.4597

TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-1000	-1000	294.651	21.501	294.651	1.13931 + 3	8.54554 + 2	1.12441 + 0	1.3470 + 0	1.0996 + 0
-950	-950	294.326	21.176	294.326	1.13272	8.49610	1.11791	1.3407	1.0945
-900	-900	294.001	20.851	294.001	1.12616	8.44689	1.11143	1.3344	1.0893
-850	-850	293.676	20.526	293.676	1.11963	8.39792	1.10499	1.3281	1.0842
-800	-800	293.351	20.201	293.351	1.11313	8.34917	1.09858	1.3219	1.0791
-750	-750	293.026	19.876	293.026	1.10666	8.30066	1.09219	1.3157	1.0740
-700	-700	292.700	19.550	292.700	1.10023	8.25237	1.08584	1.3095	1.0690
-650	-650	292.375	19.225	292.375	1.09382	8.20432	1.07952	1.3033	1.0639
-600	-600	292.050	18.900	292.050	1.08744	8.15649	1.07322	1.2971	1.0589
-550	-550	291.725	18.575	291.725	1.08110	8.10889	1.06696	1.2910	1.0539
-500	-500	291.400	18.250	291.400	1.07478 + 3	8.06151 + 2	1.06073 + 0	1.2849 + 0	1.0489 + 0
-450	-450	291.075	17.925	291.075	1.06849	8.01436	1.05452	1.2788	1.0439
-400	-400	290.750	17.600	290.750	1.06224	7.96743	1.04835	1.2727	1.0390
-350	-350	290.425	17.275	290.425	1.05601	7.92073	1.04220	1.2667	1.0340
-300	-300	290.100	16.950	290.100	1.04981	7.87425	1.03609	1.2607	1.0291
-250	-250	289.775	16.625	289.775	1.04365	7.82799	1.03000	1.2547	1.0242
-200	-200	289.450	16.300	289.450	1.03751	7.78195	1.02394	1.2487	1.0193
-150	-150	289.125	15.975	289.125	1.03140	7.73614	1.01791	1.2427	1.0145
-100	-100	288.800	15.650	288.800	1.02532	7.69054	1.01191	1.2368	1.0096
-50	-50	288.475	15.325	288.475	1.01927	7.64516	1.00594	1.2309	1.0048
0	0	288.150	15.000	288.150	1.01325 + 3	7.60000 + 2	1.00000 + 0	1.2250 + 0	1.0000 + 0
50	50	287.825	14.675	287.825	1.00726	7.55505	9.94086 - 1	1.2191	9.9521 - 1
100	100	287.500	14.350	287.500	1.00129	7.51032	9.88201	1.2133	9.9044
150	150	287.175	14.025	287.175	9.95360 + 2	7.46581	9.82344	1.2075	9.8568
200	200	286.850	13.700	286.850	9.89454	7.42151	9.76515	1.2017	9.8094
250	250	286.525	13.375	286.525	9.83576	7.37743	9.70714	1.1959	9.7622
300	300	286.200	13.050	286.200	9.77727	7.33356	9.64942	1.1901	9.7152
350	350	285.875	12.725	285.875	9.71906	7.28990	9.59197	1.1844	9.6683
400	400	285.550	12.400	285.550	9.66114	7.24645	9.53480	1.1786	9.6216
450	450	285.225	12.075	285.225	9.60349	7.20321	9.47791	1.1729	9.5751
500	500	284.900	11.750	284.900	9.54612 + 2	7.16018 + 2	9.42129 - 1	1.1673 + 0	9.5288 - 1
550	550	284.575	11.425	284.575	9.48904	7.11736	9.36495	1.1616	9.4826
600	600	284.250	11.100	284.250	9.43223	7.07475	9.30889	1.1560	9.4366
650	650	283.925	10.775	283.925	9.37570	7.03235	9.25309	1.1504	9.3908
700	700	283.600	10.450	283.600	9.31944	6.99015	9.19757	1.1448	9.3451
750	750	283.276	10.126	283.276	9.26346	6.94816	9.14232	1.1392	9.2996
800	800	282.951	9.801	282.951	9.20775	6.90638	9.08734	1.1337	9.2543
850	850	282.626	9.476	282.626	9.15231	6.86480	9.03263	1.1281	9.2092
900	900	282.301	9.151	282.301	9.09714	6.82342	8.97818	1.1226	9.1642
950	950	281.976	8.826	281.976	9.04225	6.78225	8.92401	1.1171	9.1194
1000	1000	281.651	8.501	281.651	8.98762 + 2	6.74127 + 2	8.87009 - 1	1.1117 + 0	9.0748 - 1
1050	1050	281.326	8.176	281.326	8.93327	6.70050	8.81645	1.1062	9.0303
1100	1100	281.001	7.851	281.001	8.87918	6.65993	8.76307	1.1008	8.9860
1150	1150	280.676	7.526	280.676	8.82535	6.61956	8.70995	1.0954	8.9419
1200	1200	280.351	7.201	280.351	8.77180	6.57939	8.65709	1.0900	8.8979
1250	1250	280.027	6.877	280.027	8.71850	6.53941	8.60449	1.0846	8.8541
1300	1300	279.702	6.552	279.702	8.66547	6.49964	8.55215	1.0793	8.8105
1350	1350	279.377	6.227	279.377	8.61270	6.46006	8.50008	1.0740	8.7670
1400	1400	279.052	5.902	279.052	8.56020	6.42068	8.44826	1.0687	8.7237
1450	1450	278.727	5.577	278.727	8.50795	6.38149	8.39669	1.0634	8.6806
1500	1500	278.402	5.252	278.402	8.45596 + 2	6.34249 + 2	8.34539 - 1	1.0581 + 0	8.6376 - 1
1550	1550	278.077	4.927	278.077	8.40423	6.30369	8.29433	1.0529	8.5948
1600	1600	277.753	4.603	277.753	8.35276	6.26509	8.24354	1.0476	8.5521
1650	1650	277.428	4.278	277.428	8.30155	6.22667	8.19299	1.0424	8.5096
1700	1700	277.103	3.953	277.103	8.25059	6.18845	8.14270	1.0372	8.4673
1750	1750	276.778	3.628	276.778	8.19988	6.15042	8.09265	1.0321	8.4252
1800	1799	276.453	3.303	276.453	8.14943	6.11258	8.04286	1.0269	8.3832
1850	1849	276.128	2.978	276.128	8.09923	6.07492	7.99332	1.0218	8.3413
1900	1899	275.804	2.654	275.804	8.04928	6.03746	7.94402	1.0167	8.2996
1950	1949	275.479	2.329	275.479	7.99958	6.00018	7.89498	1.0116	8.2581
2000	1999	275.154	2.004	275.154	7.95014 + 2	5.96309 + 2	7.84618 - 1	1.0066 + 0	8.2168 - 1
2050	2049	274.829	1.679	274.829	7.90094	5.92619	7.79762	1.0015	8.1756
2100	2099	274.505	1.355	274.505	7.85199	5.88947	7.74931	9.9648 - 1	8.1345
2150	2149	274.180	1.030	274.180	7.80328	5.85294	7.70124	9.9147	8.0936
2200	2199	273.855	0.705	273.855	7.75482	5.81659	7.65341	9.8648	8.0529
2250	2249	273.530	0.380	273.530	7.70661	5.78043	7.60583	9.8151	8.0124
2300	2299	273.205	0.055	273.205	7.65863	5.74445	7.55849	9.7656	7.9719
2350	2349	272.881	-0.269	272.881	7.61091	5.70865	7.51138	9.7163	7.9317
2400	2399	272.556	-0.594	272.556	7.56342	5.67303	7.46452	9.6672	7.8916
2450	2449	272.231	-0.919	272.231	7.51618	5.63760	7.41789	9.6183	7.8517
2500	2499	271.906	-1.244	271.906	7.46917 + 2	5.60234 + 2	7.37150 - 1	9.5695 - 1	7.8119 - 1
2550	2549	271.582	-1.568	271.582	7.42240	5.56726	7.32534	9.5210	7.7722
2600	2599	271.257	-1.893	271.257	7.37588	5.53236	7.27942	9.4726	7.7328
2650	2649	270.932	-2.218	270.932	7.32958	5.49764	7.23374	9.4245	7.6934
2700	2699	270.607	-2.543	270.607	7.28353	5.46310	7.18829	9.3765	7.6543
2750	2749	270.283	-2.867	270.283	7.23771	5.42873	7.14307	9.3287	7.6153
2800	2799	269.958	-3.192	269.958	7.19213	5.39454	7.09808	9.2811	7.5764
2850	2849	269.633	-3.517	269.633	7.14677	5.36052	7.05332	9.2337	7.5377
2900	2899	269.309	-3.841	269.309	7.10166	5.32668	7.00879	9.1864	7.4991
2950	2949	268.984	-4.166	268.984	7.05677	5.29301	6.96449	9.1394	7.4607



TABLE I.—Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
3000	3001	268.650	-4.500	268.650	7.01085 + 2	5.25857 + 2	6.91917 - 1	9.0912 - 1	7.4214 - 1
3050	3051	268.325	-4.825	268.325	6.96639	5.22522	6.87529	9.0445	7.3833
3100	3102	268.000	-5.150	268.000	6.92215	5.19204	6.83163	8.9980	7.3453
3150	3152	267.675	-5.475	267.675	6.87815	5.15903	6.78820	8.9516	7.3074
3200	3202	267.350	-5.800	267.350	6.83437	5.12620	6.74500	8.9055	7.2698
3250	3252	267.025	-6.125	267.025	6.79081	5.09353	6.70201	8.8595	7.2322
3300	3302	266.700	-6.450	266.700	6.74748	5.06103	6.65925	8.8137	7.1948
3350	3352	266.375	-6.775	266.375	6.70438	5.02870	6.61671	8.7681	7.1576
3400	3402	266.050	-7.100	266.050	6.66150	4.99654	6.57439	8.7226	7.1205
3450	3452	265.725	-7.425	265.725	6.61884	4.96454	6.53229	8.6774	7.0836
3500	3502	265.400	-7.750	265.400	6.57640 + 2	4.93271 + 2	6.49040 - 1	8.6323 - 1	7.0468 - 1
3550	3552	265.075	-8.075	265.075	6.53419	4.90104	6.44874	8.5874	7.0101
3600	3602	264.750	-8.400	264.750	6.49219	4.86954	6.40729	8.5427	6.9736
3650	3652	264.425	-8.725	264.425	6.45041	4.83821	6.36606	8.4981	6.9372
3700	3702	264.100	-9.050	264.100	6.40885	4.80703	6.32504	8.4538	6.9010
3750	3752	263.775	-9.375	263.775	6.36751	4.77602	6.28424	8.4096	6.8650
3800	3802	263.450	-9.700	263.450	6.32638	4.74518	6.24365	8.3656	6.8290
3850	3852	263.125	-10.025	263.125	6.28547	4.71449	6.20328	8.3217	6.7933
3900	3902	262.800	-10.350	262.800	6.24477	4.68396	6.16311	8.2781	6.7576
3950	3952	262.475	-10.675	262.475	6.20429	4.65360	6.12316	8.2346	6.7221
4000	4003	262.150	-11.000	262.150	6.16402 + 2	4.62339 + 2	6.08341 - 1	8.1913 - 1	6.6868 - 1
4050	4053	261.825	-11.325	261.825	6.12396	4.59335	6.04388	8.1482	6.6516
4100	4103	261.500	-11.650	261.500	6.08411	4.56346	6.00455	8.1052	6.6165
4150	4153	261.175	-11.975	261.175	6.04447	4.53373	5.96543	8.0624	6.5816
4200	4203	260.850	-12.300	260.850	6.00505	4.50416	5.92652	8.0198	6.5468
4250	4253	260.525	-12.625	260.525	5.96583	4.47474	5.88781	7.9774	6.5121
4300	4303	260.200	-12.950	260.200	5.92681	4.44548	5.84931	7.9351	6.4776
4350	4353	259.875	-13.275	259.875	5.88801	4.41637	5.81101	7.8930	6.4433
4400	4403	259.550	-13.600	259.550	5.84941	4.38742	5.77292	7.8511	6.4090
4450	4453	259.225	-13.925	259.225	5.81102	4.35862	5.73503	7.8093	6.3750
4500	4503	258.900	-14.250	258.900	5.77283 + 2	4.32998 + 2	5.69734 - 1	7.7677 - 1	6.3410 - 1
4550	4553	258.575	-14.575	258.575	5.73484	4.30148	5.65985	7.7263	6.3072
4600	4603	258.250	-14.900	258.250	5.69706	4.27314	5.62256	7.6851	6.2735
4650	4653	257.925	-15.225	257.925	5.65948	4.24496	5.58547	7.6440	6.2400
4700	4703	257.600	-15.550	257.600	5.62209	4.21692	5.54858	7.6031	6.2066
4750	4754	257.275	-15.875	257.275	5.58491	4.18903	5.51188	7.5624	6.1734
4800	4804	256.950	-16.200	256.950	5.54793	4.16129	5.47538	7.5218	6.1402
4850	4854	256.625	-16.525	256.625	5.51115	4.13370	5.43908	7.4814	6.1072
4900	4904	256.300	-16.850	256.300	5.47457	4.10626	5.40298	7.4411	6.0744
4950	4954	255.975	-17.175	255.975	5.43818	4.07897	5.36706	7.4011	6.0417
5000	5004	255.650	-17.500	255.650	5.40199 + 2	4.05182 + 2	5.33135 - 1	7.3612 - 1	6.0091 - 1
5050	5054	255.325	-17.825	255.325	5.36599	4.02482	5.29582	7.3214	5.9767
5100	5104	255.000	-18.150	255.000	5.33019	3.99797	5.26049	7.2818	5.9444
5150	5154	254.675	-18.475	254.675	5.29458	3.97126	5.22534	7.2424	5.9122
5200	5204	254.350	-18.800	254.350	5.25916	3.94470	5.19039	7.2032	5.8801
5250	5254	254.025	-19.125	254.025	5.22394	3.91824	5.15563	7.1641	5.8482
5300	5304	253.700	-19.450	253.700	5.18891	3.89200	5.12105	7.1251	5.8164
5350	5355	253.375	-19.775	253.375	5.15407	3.86587	5.08667	7.0864	5.7848
5400	5405	253.050	-20.100	253.050	5.11941	3.83988	5.05247	7.0478	5.7533
5450	5455	252.725	-20.425	252.725	5.08495	3.81403	5.01846	7.0093	5.7219
5500	5505	252.400	-20.750	252.400	5.05068 + 2	3.78832 + 2	4.98463 - 1	6.9711 - 1	5.6907 - 1
5550	5555	252.075	-21.075	252.075	5.01659	3.76275	4.95099	6.9329	5.6595
5600	5605	251.750	-21.400	251.750	4.98269	3.73732	4.91753	6.8950	5.6285
5650	5655	251.425	-21.725	251.425	4.94897	3.71203	4.88425	6.8572	5.5977
5700	5705	251.100	-22.050	251.100	4.91544	3.68688	4.85116	6.8195	5.5670
5750	5755	250.775	-22.375	250.775	4.88209	3.66187	4.81825	6.7820	5.5364
5800	5805	250.450	-22.700	250.450	4.84893	3.63700	4.78552	6.7447	5.5059
5850	5855	250.125	-23.025	250.125	4.81595	3.61226	4.75297	6.7075	5.4755
5900	5905	249.800	-23.350	249.800	4.78315	3.58766	4.72060	6.6705	5.4453
5950	5956	249.475	-23.675	249.475	4.75053	3.56319	4.68841	6.6337	5.4152
6000	6006	249.150	-24.000	249.150	4.71810 + 2	3.53886 + 2	4.65640 - 1	6.5970 - 1	5.3853 - 1
6050	6056	248.825	-24.325	248.825	4.68584	3.51467	4.62456	6.5604	5.3554
6100	6106	248.500	-24.650	248.500	4.65376	3.49061	4.59291	6.5240	5.3257
6150	6156	248.175	-24.975	248.175	4.62186	3.46668	4.56142	6.4878	5.2962
6200	6206	247.850	-25.300	247.850	4.59014	3.44289	4.53011	6.4517	5.2667
6250	6256	247.525	-25.625	247.525	4.55859	3.41922	4.49898	6.4158	5.2374
6300	6306	247.200	-25.950	247.200	4.52722	3.39569	4.46802	6.3800	5.2082
6350	6356	246.875	-26.275	246.875	4.49602	3.37230	4.43723	6.3444	5.1791
6400	6406	246.550	-26.600	246.550	4.46500	3.34903	4.40662	6.3089	5.1501
6450	6457	246.225	-26.925	246.225	4.43415	3.32589	4.37617	6.2736	5.1213
6500	6507	245.900	-27.250	245.900	4.40348 + 2	3.30288 + 2	4.34590 - 1	6.2384 - 1	5.0926 - 1
6550	6557	245.575	-27.575	245.575	4.37298	3.28000	4.31579	6.2034	5.0640
6600	6607	245.250	-27.900	245.250	4.34264	3.25725	4.28586	6.1686	5.0356
6650	6657	244.925	-28.225	244.925	4.31248	3.23463	4.25609	6.1338	5.0072
6700	6707	244.600	-28.550	244.600	4.28249	3.21213	4.22649	6.0993	4.9790
6750	6757	244.275	-28.875	244.275	4.25267	3.18976	4.19706	6.0649	4.9509
6800	6807	243.950	-29.200	243.950	4.22302	3.16752	4.16779	6.0306	4.9229
6850	6857	243.625	-29.525	243.625	4.19353	3.14541	4.13869	5.9965	4.8951
6900	6907	243.300	-29.850	243.300	4.16421	3.12341	4.10976	5.9625	4.8674
6950	6958	242.975	-30.175	242.975	4.13506	3.10155	4.08098	5.9287	4.8397

TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
3000	2999	268.659	-4.491	268.659	7.01211 + 2	5.25952 + 2	6.92042 - 1	9.0925 - 1	7.4225 - 1
3050	3049	268.335	-4.815	268.335	6.96768	5.22619	6.87657	9.0459	7.3844
3100	3098	268.010	-5.140	268.010	6.92349	5.19304	6.83295	8.9994	7.3464
3150	3148	267.685	-5.465	267.685	6.87952	5.16006	6.78956	8.9531	7.3086
3200	3198	267.360	-5.790	267.360	6.83577	5.12725	6.74638	8.9069	7.2710
3250	3248	267.036	-6.114	267.036	6.79226	5.09461	6.70344	8.8610	7.2335
3300	3298	266.711	-6.439	266.711	6.74897	5.06214	6.66071	8.8152	7.1961
3350	3348	266.386	-6.764	266.386	6.70590	5.02984	6.61821	8.7697	7.1589
3400	3398	266.062	-7.088	266.062	6.66305	4.99770	6.57592	8.7243	7.1219
3450	3448	265.737	-7.413	265.737	6.62043	4.96573	6.53386	8.6791	7.0849
3500	3498	265.413	-7.737	265.413	6.57803 + 2	4.93393 + 2	6.49201 - 1	8.6340 - 1	7.0482 - 1
3550	3548	265.088	-8.062	265.088	6.53586	4.90229	6.45039	8.5892	7.0116
3600	3598	264.763	-8.387	264.763	6.49390	4.87082	6.40898	8.5445	6.9751
3650	3648	264.439	-8.711	264.439	6.45216	4.83952	6.36778	8.5000	6.9388
3700	3698	264.114	-9.036	264.114	6.41064	4.80837	6.32681	8.4557	6.9026
3750	3748	263.789	-9.361	263.789	6.36933	4.77739	6.28604	8.4115	6.8666
3800	3798	263.465	-9.685	263.465	6.32824	4.74657	6.24549	8.3676	6.8307
3850	3848	263.140	-10.010	263.140	6.28737	4.71592	6.20515	8.3238	6.7949
3900	3898	262.816	-10.334	262.816	6.24671	4.68542	6.16503	8.2802	6.7593
3950	3948	262.491	-10.659	262.491	6.20627	4.65509	6.12511	8.2367	6.7239
4000	3997	262.166	-10.984	262.166	6.16604 + 2	4.62491 + 2	6.08541 - 1	8.1935 - 1	6.6885 - 1
4050	4047	261.842	-11.308	261.842	6.12602	4.59489	6.04591	8.1504	6.6534
4100	4097	261.517	-11.633	261.517	6.08621	4.56504	6.00663	8.1075	6.6183
4150	4147	261.193	-11.957	261.193	6.04662	4.53533	5.96755	8.0647	6.5835
4200	4197	260.868	-12.282	260.868	6.00723	4.50579	5.92867	8.0222	6.5487
4250	4247	260.543	-12.607	260.543	5.96805	4.47640	5.89001	7.9798	6.5141
4300	4297	260.219	-12.931	260.219	5.92908	4.44717	5.85154	7.9376	6.4796
4350	4347	259.894	-13.256	259.894	5.89031	4.41810	5.81329	7.8955	6.4453
4400	4397	259.570	-13.580	259.570	5.85175	4.38918	5.77523	7.8536	6.4111
4450	4447	259.245	-13.905	259.245	5.81340	4.36041	5.73738	7.8119	6.3771
4500	4497	258.921	-14.229	258.921	5.77525 + 2	4.33180 + 2	5.69973 - 1	7.7704 - 1	6.3432 - 1
4550	4547	258.596	-14.554	258.596	5.73731	4.30333	5.66228	7.7290	6.3094
4600	4597	258.272	-14.878	258.272	5.69957	4.27503	5.62503	7.6878	6.2758
4650	4647	257.947	-15.203	257.947	5.66202	4.24687	5.58798	7.6468	6.2423
4700	4697	257.623	-15.527	257.623	5.62468	4.21886	5.55113	7.6059	6.2089
4750	4746	257.298	-15.852	257.298	5.58755	4.19100	5.51448	7.5652	6.1757
4800	4796	256.974	-16.176	256.974	5.55061	4.16330	5.47802	7.5247	6.1426
4850	4846	256.649	-16.501	256.649	5.51386	4.13574	5.44176	7.4844	6.1097
4900	4896	256.325	-16.825	256.325	5.47732	4.10833	5.40570	7.4442	6.0769
4950	4946	256.000	-17.150	256.000	5.44097	4.08107	5.36982	7.4041	6.0442
5000	4996	255.676	-17.474	255.676	5.40482 + 2	4.05395 + 2	5.33415 - 1	7.3643 - 1	6.0117 - 1
5050	5046	255.351	-17.799	255.351	5.36887	4.02698	5.29866	7.3246	5.9793
5100	5096	255.027	-18.123	255.027	5.33311	4.00016	5.26337	7.2851	5.9470
5150	5146	254.702	-18.448	254.702	5.29754	3.97348	5.22827	7.2457	5.9149
5200	5196	254.378	-18.772	254.378	5.26217	3.94695	5.19335	7.2065	5.8829
5250	5246	254.053	-19.097	254.053	5.22698	3.92056	5.15863	7.1675	5.8510
5300	5296	253.729	-19.421	253.729	5.19199	3.89432	5.12410	7.1286	5.8192
5350	5346	253.404	-19.746	253.404	5.15719	3.86821	5.08975	7.0899	5.7876
5400	5395	253.080	-20.070	253.080	5.12258	3.84225	5.05560	7.0513	5.7562
5450	5445	252.755	-20.395	252.755	5.08816	3.81643	5.02162	7.0129	5.7248
5500	5495	252.431	-20.719	252.431	5.05393 + 2	3.79076 + 2	4.98784 - 1	6.9747 - 1	5.6936 - 1
5550	5545	252.106	-21.044	252.106	5.01988	3.76522	4.95424	6.9366	5.6625
5600	5595	251.782	-21.368	251.782	4.98602	3.73982	4.92082	6.8987	5.6316
5650	5645	251.458	-21.692	251.458	4.95235	3.71456	4.88759	6.8610	5.6008
5700	5695	251.133	-22.017	251.133	4.91886	3.68945	4.85453	6.8234	5.5701
5750	5745	250.809	-22.341	250.809	4.88555	3.66446	4.82166	6.7859	5.5395
5800	5795	250.484	-22.666	250.484	4.85243	3.63962	4.78898	6.7486	5.5091
5850	5845	250.160	-22.990	250.160	4.81949	3.61491	4.75647	6.7115	5.4788
5900	5895	249.836	-23.314	249.836	4.78673	3.59034	4.72414	6.6746	5.4486
5950	5944	249.511	-23.639	249.511	4.75416	3.56591	4.69199	6.6378	5.4186
6000	5994	249.187	-23.963	249.187	4.72176 + 2	3.54161 + 2	4.66001 - 1	6.6011 - 1	5.3887 - 1
6050	6044	248.862	-24.288	248.862	4.68954	3.51745	4.62822	6.5646	5.3589
6100	6094	248.538	-24.612	248.538	4.65750	3.49342	4.59660	6.5283	5.3292
6150	6144	248.214	-24.936	248.214	4.62564	3.46952	4.56516	6.4921	5.2997
6200	6194	247.889	-25.261	247.889	4.59396	3.44576	4.53389	6.4561	5.2703
6250	6244	247.565	-25.585	247.565	4.56246	3.42212	4.50279	6.4202	5.2410
6300	6294	247.241	-25.909	247.241	4.53112	3.39862	4.47187	6.3845	5.2118
6350	6344	246.916	-26.234	246.916	4.49997	3.37525	4.44112	6.3489	5.1828
6400	6394	246.592	-26.558	246.592	4.46899	3.35202	4.41055	6.3135	5.1539
6450	6443	246.267	-26.882	246.267	4.43818	3.32891	4.38014	6.2782	5.1251
6500	6493	245.943	-27.207	245.943	4.40754 + 2	3.30593 + 2	4.34991 - 1	6.2431 - 1	5.0964 - 1
6550	6543	245.619	-27.531	245.619	4.37708	3.28308	4.31984	6.2081	5.0679
6600	6593	245.294	-27.855	245.294	4.34679	3.26036	4.28995	6.1733	5.0394
6650	6643	244.970	-28.180	244.970	4.31667	3.23777	4.26022	6.1387	5.0111
6700	6693	244.646	-28.504	244.646	4.28671	3.21530	4.23066	6.1041	4.9830
6750	6743	244.322	-28.828	244.322	4.25693	3.19296	4.20126	6.0698	4.9549
6800	6793	243.997	-29.153	243.997	4.22732	3.17075	4.17204	6.0356	4.9270
6850	6843	243.673	-29.477	243.673	4.19787	3.14866	4.14297	6.0015	4.8992
6900	6893	243.349	-29.801	243.349	4.16859	3.12670	4.11408	5.9676	4.8715
6950	6942	243.024	-30.126	243.024	4.13947	3.10486	4.08534	5.9338	4.8439



TABLE I.—Continued  
 GEOPOTENTIAL ALTITUDE, METRIC UNITS.

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho, \text{kg m}^{-3}$	$\frac{\rho}{\rho_0}$
7000	7008	242.650	-30.500	242.650	4.10607 + 2	3.07981 + 2	4.05238 - 1	5.8950 - 1	4.8122 - 1
7050	7058	242.325	-30.825	242.325	4.07725	3.05819	4.02393	5.8615	4.7849
7100	7108	242.000	-31.150	242.000	4.04859	3.03669	3.99565	5.8281	4.7576
7150	7158	241.675	-31.475	241.675	4.02009	3.01532	3.96752	5.7949	4.7305
7200	7208	241.350	-31.800	241.350	3.99176	2.99407	3.93956	5.7618	4.7035
7250	7258	241.025	-32.125	241.025	3.96359	2.97294	3.91176	5.7288	4.6766
7300	7308	240.700	-32.450	240.700	3.93558	2.95193	3.88411	5.6960	4.6498
7350	7359	240.375	-32.775	240.375	3.90773	2.93104	3.85663	5.6634	4.6231
7400	7409	240.050	-33.100	240.050	3.88004	2.91027	3.82930	5.6308	4.5966
7450	7459	239.725	-33.425	239.725	3.85251	2.88962	3.80213	5.5985	4.5702
7500	7509	239.400	-33.750	239.400	3.82514 + 2	2.86909 + 2	3.77512 - 1	5.5662 - 1	4.5439 - 1
7550	7559	239.075	-34.075	239.075	3.79792	2.84868	3.74826	5.5341	4.5177
7600	7609	238.750	-34.400	238.750	3.77087	2.82838	3.72156	5.5022	4.4916
7650	7659	238.425	-34.725	238.425	3.74396	2.80820	3.69501	5.4704	4.4656
7700	7709	238.100	-35.050	238.100	3.71722	2.78814	3.66861	5.4387	4.4398
7750	7759	237.775	-35.375	237.775	3.69063	2.76820	3.64237	5.4072	4.4140
7800	7810	237.450	-35.700	237.450	3.66419	2.74837	3.61628	5.3758	4.3884
7850	7860	237.125	-36.025	237.125	3.63791	2.72866	3.59034	5.3446	4.3629
7900	7910	236.800	-36.350	236.800	3.61178	2.70906	3.56455	5.3135	4.3375
7950	7960	236.475	-36.675	236.475	3.58580	2.68957	3.53891	5.2825	4.3122
8000	8010	236.150	-37.000	236.150	3.55998 + 2	2.67020 + 2	3.51342 - 1	5.2517 - 1	4.2871 - 1
8050	8060	235.825	-37.325	235.825	3.53430	2.65094	3.48808	5.2210	4.2620
8100	8110	235.500	-37.650	235.500	3.50878	2.63180	3.46289	5.1904	4.2371
8150	8160	235.175	-37.975	235.175	3.48340	2.61276	3.43785	5.1600	4.2123
8200	8211	234.850	-38.300	234.850	3.45817	2.59384	3.41295	5.1297	4.1875
8250	8261	234.525	-38.625	234.525	3.43309	2.57503	3.38820	5.0996	4.1629
8300	8311	234.200	-38.950	234.200	3.40816	2.55633	3.36360	5.0696	4.1384
8350	8361	233.875	-39.275	233.875	3.38338	2.53774	3.33913	5.0397	4.1140
8400	8411	233.550	-39.600	233.550	3.35874	2.51926	3.31482	5.0100	4.0898
8450	8461	233.225	-39.925	233.225	3.33425	2.50089	3.29065	4.9804	4.0656
8500	8511	232.900	-40.250	232.900	3.30990 + 2	2.48263 + 2	3.26662 - 1	4.9509 - 1	4.0415 - 1
8550	8562	232.575	-40.575	232.575	3.28570	2.46447	3.24273	4.9216	4.0176
8600	8612	232.250	-40.900	232.250	3.26164	2.44643	3.21898	4.8924	3.9938
8650	8662	231.925	-41.225	231.925	3.23772	2.42849	3.19538	4.8633	3.9700
8700	8712	231.600	-41.550	231.600	3.21394	2.41066	3.17191	4.8343	3.9464
8750	8762	231.275	-41.875	231.275	3.19031	2.39293	3.14859	4.8055	3.9229
8800	8812	230.950	-42.200	230.950	3.16682	2.37531	3.12540	4.7769	3.8995
8850	8862	230.625	-42.525	230.625	3.14346	2.35779	3.10236	4.7483	3.8762
8900	8912	230.300	-42.850	230.300	3.12025	2.34038	3.07945	4.7199	3.8530
8950	8963	229.975	-43.175	229.975	3.09718	2.32307	3.05668	4.6916	3.8299
9000	9013	229.650	-43.500	229.650	3.07424 + 2	2.30587 + 2	3.03404 - 1	4.6635 - 1	3.8069 - 1
9050	9063	229.325	-43.825	229.325	3.05144	2.28877	3.01154	4.6355	3.7840
9100	9113	229.000	-44.150	229.000	3.02878	2.27177	2.98918	4.6076	3.7613
9150	9163	228.675	-44.475	228.675	3.00626	2.25488	2.96695	4.5798	3.7386
9200	9213	228.350	-44.800	228.350	2.98387	2.23809	2.94485	4.5522	3.7160
9250	9263	228.025	-45.125	228.025	2.96162	2.22140	2.92289	4.5246	3.6936
9300	9314	227.700	-45.450	227.700	2.93950	2.20481	2.90106	4.4973	3.6712
9350	9364	227.375	-45.775	227.375	2.91751	2.18832	2.87936	4.4700	3.6490
9400	9414	227.050	-46.100	227.050	2.89566	2.17193	2.85780	4.4429	3.6268
9450	9464	226.725	-46.425	226.725	2.87394	2.15564	2.83636	4.4159	3.6048
9500	9514	226.400	-46.750	226.400	2.85236 + 2	2.13944 + 2	2.81506 - 1	4.3890 - 1	3.5829 - 1
9550	9564	226.075	-47.075	226.075	2.83090	2.12335	2.79388	4.3623	3.5610
9600	9615	225.750	-47.400	225.750	2.80958	2.10736	2.77284	4.3356	3.5393
9650	9665	225.425	-47.725	225.425	2.78838	2.09146	2.75192	4.3091	3.5177
9700	9715	225.100	-48.050	225.100	2.76732	2.07566	2.73113	4.2827	3.4961
9750	9765	224.775	-48.375	224.775	2.74638	2.05996	2.71047	4.2565	3.4747
9800	9815	224.450	-48.700	224.450	2.72558	2.04435	2.68994	4.2304	3.4534
9850	9865	224.125	-49.025	224.125	2.70490	2.02884	2.66953	4.2044	3.4321
9900	9915	223.800	-49.350	223.800	2.68435	2.01343	2.64924	4.1785	3.4110
9950	9966	223.475	-49.675	223.475	2.66392	1.99811	2.62909	4.1527	3.3900
10000	10016	223.150	-50.000	223.150	2.64362 + 2	1.98288 + 2	2.60905 - 1	4.1271 - 1	3.3690 - 1
10050	10066	222.825	-50.325	222.825	2.62345	1.96775	2.58914	4.1015	3.3482
10100	10116	222.500	-50.650	222.500	2.60340	1.95271	2.56936	4.0761	3.3275
10150	10166	222.175	-50.975	222.175	2.58348	1.93777	2.54969	4.0509	3.3068
10200	10216	221.850	-51.300	221.850	2.56367	1.92291	2.53015	4.0257	3.2863
10250	10267	221.525	-51.625	221.525	2.54400	1.90815	2.51073	4.0007	3.2658
10300	10317	221.200	-51.950	221.200	2.52444	1.89349	2.49143	3.9757	3.2455
10350	10367	220.875	-52.275	220.875	2.50501	1.87891	2.47225	3.9509	3.2253
10400	10417	220.550	-52.600	220.550	2.48570	1.86442	2.45319	3.9263	3.2051
10450	10467	220.225	-52.925	220.225	2.46650	1.85003	2.43425	3.9017	3.1851
10500	10517	219.900	-53.250	219.900	2.44743 + 2	1.83573 + 2	2.41543 - 1	3.8772 - 1	3.1651 - 1
10550	10568	219.575	-53.575	219.575	2.42848	1.82151	2.39672	3.8529	3.1452
10600	10618	219.250	-53.900	219.250	2.40965	1.80738	2.37814	3.8287	3.1255
10650	10668	218.925	-54.225	218.925	2.39093	1.79335	2.35967	3.8046	3.1058
10700	10718	218.600	-54.550	218.600	2.37234	1.77940	2.34131	3.7806	3.0862
10750	10768	218.275	-54.875	218.275	2.35386	1.76554	2.32308	3.7568	3.0668
10800	10818	217.950	-55.200	217.950	2.33550	1.75177	2.30496	3.7330	3.0474
10850	10869	217.625	-55.525	217.625	2.31725	1.73808	2.28695	3.7094	3.0281
10900	10919	217.300	-55.850	217.300	2.29912	1.72448	2.26905	3.6859	3.0089
10950	10969	216.975	-56.175	216.975	2.28110	1.71097	2.25127	3.6625	2.9898

TABLE I. — Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
7000	6992	242.700	-30.450	242.700	4.11052 + 2	3.08315 + 2	4.05677 - 1	5.9002 - 1	4.8165 - 1
7050	7042	242.376	-30.774	242.376	4.08174	3.06156	4.02836	5.8667	4.7891
7100	7092	242.051	-31.099	242.051	4.05312	3.04009	4.00012	5.8334	4.7619
7150	7142	241.727	-31.423	241.727	4.02466	3.01874	3.97203	5.8002	4.7348
7200	7192	241.403	-31.747	241.403	3.99636	2.99752	3.94411	5.7671	4.7079
7250	7242	241.079	-32.071	241.079	3.96823	2.97642	3.91634	5.7342	4.6810
7300	7292	240.754	-32.396	240.754	3.94026	2.95544	3.88873	5.7015	4.6543
7350	7342	240.430	-32.720	240.430	3.91245	2.93458	3.86128	5.6689	4.6277
7400	7391	240.106	-33.044	240.106	3.88479	2.91384	3.83399	5.6364	4.6012
7450	7441	239.782	-33.368	239.782	3.85730	2.89321	3.80686	5.6041	4.5748
7500	7491	239.457	-33.693	239.457	3.82996 + 2	2.87271 + 2	3.77988 - 1	5.5719 - 1	4.5485 - 1
7550	7541	239.133	-34.017	239.133	3.80279	2.85232	3.75306	5.5399	4.5224
7600	7591	238.809	-34.341	238.809	3.77577	2.83206	3.72639	5.5080	4.4963
7650	7641	238.485	-34.665	238.485	3.74890	2.81191	3.69988	5.4762	4.4704
7700	7691	238.161	-34.989	238.161	3.72219	2.79187	3.67352	5.4446	4.4446
7750	7741	237.836	-35.314	237.836	3.69564	2.77196	3.64731	5.4131	4.4189
7800	7790	237.512	-35.638	237.512	3.66924	2.75215	3.62125	5.3818	4.3933
7850	7840	237.188	-35.962	237.188	3.64299	2.73247	3.59535	5.3506	4.3678
7900	7890	236.864	-36.286	236.864	3.61689	2.71289	3.56960	5.3196	4.3425
7950	7940	236.540	-36.610	236.540	3.59095	2.69343	3.54399	5.2886	4.3173
8000	7990	236.215	-36.935	236.215	3.56516 + 2	2.67409 + 2	3.51854 - 1	5.2579 - 1	4.2921 - 1
8050	8040	235.891	-37.259	235.891	3.53952	2.65486	3.49323	5.2272	4.2671
8100	8090	235.567	-37.583	235.567	3.51403	2.63574	3.46807	5.1967	4.2422
8150	8140	235.243	-37.907	235.243	3.48868	2.61673	3.44306	5.1663	4.2174
8200	8189	234.919	-38.231	234.919	3.46349	2.59783	3.41820	5.1361	4.1927
8250	8239	234.595	-38.555	234.595	3.43845	2.57905	3.39348	5.1060	4.1682
8300	8289	234.270	-38.880	234.270	3.41355	2.56037	3.36891	5.0761	4.1437
8350	8339	233.946	-39.204	233.946	3.38880	2.54181	3.34448	5.0462	4.1194
8400	8389	233.622	-39.528	233.622	3.36419	2.52335	3.32020	5.0165	4.0951
8450	8439	233.298	-39.852	233.298	3.33973	2.50500	3.29606	4.9870	4.0710
8500	8489	232.974	-40.176	232.974	3.31544 + 2	2.48677 + 2	3.27206 - 1	4.9576 - 1	4.0470 - 1
8550	8539	232.650	-40.500	232.650	3.29124	2.46864	3.24820	4.9283	4.0231
8600	8588	232.326	-40.824	232.326	3.26721	2.45061	3.22449	4.8991	3.9993
8650	8638	232.001	-41.149	232.001	3.24333	2.43270	3.20092	4.8701	3.9756
8700	8688	231.677	-41.473	231.677	3.21958	2.41489	3.17748	4.8412	3.9520
8750	8738	231.353	-41.797	231.353	3.19598	2.39718	3.15419	4.8125	3.9285
8800	8788	231.029	-42.121	231.029	3.17252	2.37959	3.13103	4.7838	3.9052
8850	8838	230.705	-42.445	230.705	3.14920	2.36209	3.10802	4.7553	3.8819
8900	8888	230.381	-42.769	230.381	3.12602	2.34470	3.08514	4.7270	3.8588
8950	8937	230.057	-43.093	230.057	3.10297	2.32742	3.06239	4.6987	3.8357
9000	8987	229.733	-43.417	229.733	3.08007 + 2	2.31024 + 2	3.03979 - 1	4.6706 - 1	3.8128 - 1
9050	9037	229.409	-43.741	229.409	3.05730	2.29316	3.01732	4.6427	3.7899
9100	9087	229.085	-44.065	229.085	3.03467	2.27619	2.99498	4.6148	3.7672
9150	9137	228.760	-44.390	228.760	3.01217	2.25931	2.97278	4.5871	3.7446
9200	9187	228.436	-44.714	228.436	2.98981	2.24254	2.95071	4.5595	3.7220
9250	9237	228.112	-45.038	228.112	2.96759	2.22587	2.92878	4.5320	3.6996
9300	9286	227.788	-45.362	227.788	2.94550	2.20930	2.90698	4.5047	3.6773
9350	9336	227.464	-45.686	227.464	2.92354	2.19283	2.88531	4.4775	3.6551
9400	9386	227.140	-46.010	227.140	2.90172	2.17647	2.86377	4.4504	3.6330
9450	9436	226.816	-46.334	226.816	2.88002	2.16020	2.84236	4.4234	3.6110
9500	9486	226.492	-46.658	226.492	2.85846 + 2	2.14402 + 2	2.82109 - 1	4.3966 - 1	3.5891 - 1
9550	9536	226.168	-46.982	226.168	2.83704	2.12795	2.79994	4.3699	3.5673
9600	9586	225.844	-47.306	225.844	2.81574	2.11198	2.77892	4.3433	3.5456
9650	9635	225.520	-47.630	225.520	2.79457	2.09610	2.75803	4.3169	3.5240
9700	9685	225.196	-47.954	225.196	2.77353	2.08032	2.73726	4.2905	3.5025
9750	9735	224.872	-48.278	224.872	2.75262	2.06464	2.71663	4.2643	3.4811
9800	9785	224.548	-48.602	224.548	2.73184	2.04905	2.69612	4.2382	3.4598
9850	9835	224.224	-48.926	224.224	2.71119	2.03356	2.67573	4.2123	3.4386
9900	9885	223.900	-49.250	223.900	2.69066	2.01816	2.65548	4.1864	3.4175
9950	9934	223.576	-49.574	223.576	2.67026	2.00286	2.63534	4.1607	3.3965
10000	9984	223.252	-49.898	223.252	2.64999 + 2	1.98765 + 2	2.61533 - 1	4.1351 - 1	3.3756 - 1
10050	10034	222.928	-50.222	222.928	2.62984	1.97254	2.59545	4.1096	3.3548
10100	10084	222.604	-50.546	222.604	2.60981	1.95752	2.57568	4.0843	3.3341
10150	10134	222.280	-50.870	222.280	2.58991	1.94259	2.55604	4.0590	3.3135
10200	10184	221.956	-51.194	221.956	2.57013	1.92776	2.53652	4.0339	3.2930
10250	10233	221.632	-51.518	221.632	2.55048	1.91302	2.51713	4.0089	3.2726
10300	10283	221.308	-51.842	221.308	2.53094	1.89836	2.49785	3.9840	3.2523
10350	10333	220.984	-52.166	220.984	2.51153	1.88381	2.47869	3.9593	3.2321
10400	10383	220.660	-52.490	220.660	2.49224	1.86934	2.45965	3.9346	3.2119
10450	10433	220.336	-52.814	220.336	2.47307	1.85496	2.44073	3.9101	3.1919
10500	10483	220.013	-53.137	220.013	2.45402 + 2	1.84067 + 2	2.42193 - 1	3.8857 - 1	3.1720 - 1
10550	10533	219.689	-53.461	219.689	2.43509	1.82647	2.40325	3.8614	3.1522
10600	10582	219.365	-53.785	219.365	2.41628	1.81236	2.38468	3.8372	3.1324
10650	10632	219.041	-54.109	219.041	2.39759	1.79834	2.36624	3.8132	3.1128
10700	10682	218.717	-54.433	218.717	2.37901	1.78441	2.34790	3.7892	3.0933
10750	10732	218.393	-54.757	218.393	2.36055	1.77056	2.32968	3.7654	3.0738
10800	10782	218.069	-55.081	218.069	2.34221	1.75680	2.31158	3.7417	3.0545
10850	10832	217.745	-55.405	217.745	2.32398	1.74313	2.29359	3.7181	3.0352
10900	10881	217.421	-55.729	217.421	2.30587	1.72955	2.27572	3.6946	3.0160
10950	10931	217.097	-56.053	217.097	2.28788	1.71605	2.25796	3.6713	2.9970

TABLE I.—Continued  
 GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
11000	11019	216.650	-56.500	216.650	2.26320 + 2	1.69754 + 2	2.23361 - 1	3.6392 - 1	2.9708 - 1
11100	11119	216.650	-56.500	216.650	2.22779	1.67098	2.19866	3.5822	2.9243
11200	11220	216.650	-56.500	216.650	2.19294	1.64484	2.16426	3.5262	2.8785
11300	11320	216.650	-56.500	216.650	2.15863	1.61911	2.13040	3.4710	2.8335
11400	11420	216.650	-56.500	216.650	2.12486	1.59377	2.09707	3.4167	2.7892
11500	11521	216.650	-56.500	216.650	2.09161	1.56884	2.06426	3.3633	2.7455
11600	11621	216.650	-56.500	216.650	2.05889	1.54430	2.03197	3.3106	2.7026
11700	11722	216.650	-56.500	216.650	2.02668	1.52013	2.00018	3.2589	2.6603
11800	11822	216.650	-56.500	216.650	1.99497	1.49635	1.96888	3.2079	2.6187
11900	11922	216.650	-56.500	216.650	1.96376	1.47294	1.93808	3.1577	2.5777
12000	12023	216.650	-56.500	216.650	1.93304 + 2	1.44990 + 2	1.90776 - 1	3.1083 - 1	2.5374 - 1
12100	12123	216.650	-56.500	216.650	1.90279	1.42721	1.87791	3.0596	2.4977
12200	12223	216.650	-56.500	216.650	1.87302	1.40488	1.84853	3.0118	2.4586
12300	12324	216.650	-56.500	216.650	1.84372	1.38290	1.81961	2.9647	2.4201
12400	12424	216.650	-56.500	216.650	1.81488	1.36127	1.79114	2.9183	2.3823
12500	12525	216.650	-56.500	216.650	1.78648	1.33997	1.76312	2.8726	2.3450
12600	12625	216.650	-56.500	216.650	1.75853	1.31901	1.73554	2.8277	2.3083
12700	12725	216.650	-56.500	216.650	1.73102	1.29837	1.70838	2.7834	2.2722
12800	12826	216.650	-56.500	216.650	1.70394	1.27806	1.68165	2.7399	2.2366
12900	12926	216.650	-56.500	216.650	1.67728	1.25806	1.65534	2.6970	2.2017
13000	13027	216.650	-56.500	216.650	1.65104 + 2	1.23838 + 2	1.62945 - 1	2.6548 - 1	2.1672 - 1
13100	13127	216.650	-56.500	216.650	1.62521	1.21900	1.60395	2.6133	2.1333
13200	13227	216.650	-56.500	216.650	1.59978	1.19993	1.57886	2.5724	2.0999
13300	13328	216.650	-56.500	216.650	1.57475	1.18116	1.55416	2.5322	2.0671
13400	13428	216.650	-56.500	216.650	1.55011	1.16268	1.52984	2.4925	2.0347
13500	13529	216.650	-56.500	216.650	1.52586	1.14449	1.50591	2.4535	2.0029
13600	13629	216.650	-56.500	216.650	1.50199	1.12658	1.48235	2.4152	1.9716
13700	13730	216.650	-56.500	216.650	1.47849	1.10896	1.45916	2.3774	1.9407
13800	13830	216.650	-56.500	216.650	1.45536	1.09161	1.43633	2.3402	1.9104
13900	13930	216.650	-56.500	216.650	1.43259	1.07453	1.41386	2.3036	1.8805
14000	14031	216.650	-56.500	216.650	1.41018 + 2	1.05772 + 2	1.39174 - 1	2.2675 - 1	1.8510 - 1
14100	14131	216.650	-56.500	216.650	1.38811	1.04117	1.36996	2.2321	1.8221
14200	14232	216.650	-56.500	216.650	1.36640	1.02488	1.34853	2.1971	1.7936
14300	14332	216.650	-56.500	216.650	1.34502	1.00885	1.32743	2.1628	1.7655
14400	14433	216.650	-56.500	216.650	1.32398	9.93064 + 1	1.30666	2.1289	1.7379
14500	14533	216.650	-56.500	216.650	1.30326	9.77527	1.28622	2.0956	1.7107
14600	14634	216.650	-56.500	216.650	1.28287	9.62234	1.26610	2.0628	1.6839
14700	14734	216.650	-56.500	216.650	1.26280	9.47179	1.24629	2.0306	1.6576
14800	14835	216.650	-56.500	216.650	1.24305	9.32361	1.22679	1.9988	1.6317
14900	14935	216.650	-56.500	216.650	1.22360	9.17774	1.20760	1.9675	1.6061
15000	15035	216.650	-56.500	216.650	1.20445 + 2	9.03415 + 1	1.18870 - 1	1.9367 - 1	1.5810 - 1
15100	15136	216.650	-56.500	216.650	1.18561	8.89281	1.17011	1.9064	1.5563
15200	15236	216.650	-56.500	216.650	1.16706	8.75368	1.15180	1.8766	1.5319
15300	15337	216.650	-56.500	216.650	1.14880	8.61672	1.13378	1.8472	1.5080
15400	15437	216.650	-56.500	216.650	1.13083	8.48191	1.11604	1.8183	1.4844
15500	15538	216.650	-56.500	216.650	1.11314	8.34921	1.09858	1.7899	1.4611
15600	15638	216.650	-56.500	216.650	1.09572	8.21859	1.08139	1.7619	1.4383
15700	15739	216.650	-56.500	216.650	1.07858	8.09001	1.06447	1.7343	1.4158
15800	15839	216.650	-56.500	216.650	1.06170	7.96344	1.04782	1.7072	1.3936
15900	15940	216.650	-56.500	216.650	1.04509	7.83885	1.03143	1.6805	1.3718
16000	16040	216.650	-56.500	216.650	1.02874 + 2	7.71621 + 1	1.01529 - 1	1.6542 - 1	1.3504 - 1
16100	16141	216.650	-56.500	216.650	1.01265	7.59549	9.99406 - 2	1.6283	1.3292
16200	16241	216.650	-56.500	216.650	9.96805 + 1	7.47665	9.83770	1.6028	1.3084
16300	16342	216.650	-56.500	216.650	9.81210	7.35968	9.68379	1.5778	1.2880
16400	16442	216.650	-56.500	216.650	9.65859	7.24454	9.53229	1.5531	1.2678
16500	16543	216.650	-56.500	216.650	9.50748	7.13119	9.38315	1.5288	1.2480
16600	16643	216.650	-56.500	216.650	9.35873	7.01963	9.23635	1.5049	1.2285
16700	16744	216.650	-56.500	216.650	9.21231	6.90980	9.09185	1.4813	1.2092
16800	16845	216.650	-56.500	216.650	9.06818	6.80170	8.94960	1.4581	1.1903
16900	16945	216.650	-56.500	216.650	8.92631	6.69528	8.80958	1.4353	1.1717
17000	17046	216.650	-56.500	216.650	8.78666 + 1	6.59053 + 1	8.67176 - 2	1.4129 - 1	1.1534 - 1
17100	17146	216.650	-56.500	216.650	8.64919	6.48742	8.53609	1.3908	1.1353
17200	17247	216.650	-56.500	216.650	8.51387	6.38593	8.40254	1.3690	1.1176
17300	17347	216.650	-56.500	216.650	8.38067	6.28602	8.27108	1.3476	1.1001
17400	17448	216.650	-56.500	216.650	8.24955	6.18767	8.14168	1.3265	1.0829
17500	17548	216.650	-56.500	216.650	8.12049	6.09087	8.01430	1.3058	1.0659
17600	17649	216.650	-56.500	216.650	7.99344	5.99557	7.88891	1.2853	1.0492
17700	17749	216.650	-56.500	216.650	7.86838	5.90177	7.76549	1.2652	1.0328
17800	17850	216.650	-56.500	216.650	7.74528	5.80944	7.64400	1.2454	1.0167
17900	17951	216.650	-56.500	216.650	7.62410	5.71855	7.52440	1.2259	1.0008
18000	18051	216.650	-56.500	216.650	7.50482 + 1	5.62908 + 1	7.40668 - 2	1.2068 - 1	9.8511 - 2
18100	18152	216.650	-56.500	216.650	7.38741	5.54101	7.29080	1.1879	9.6970
18200	18252	216.650	-56.500	216.650	7.27183	5.45432	7.17674	1.1693	9.5452
18300	18353	216.650	-56.500	216.650	7.15806	5.36899	7.06446	1.1510	9.3959
18400	18453	216.650	-56.500	216.650	7.04607	5.28499	6.95393	1.1330	9.2489
18500	18554	216.650	-56.500	216.650	6.93583	5.20230	6.84514	1.1153	9.1042
18600	18655	216.650	-56.500	216.650	6.82732	5.12091	6.73804	1.0978	8.9618
18700	18755	216.650	-56.500	216.650	6.72051	5.04080	6.63263	1.0806	8.8216
18800	18856	216.650	-56.500	216.650	6.61536	4.96193	6.52886	1.0637	8.6835
18900	18956	216.650	-56.500	216.650	6.51187	4.88430	6.42671	1.0471	8.5477



TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
11000	10981	216.774	-56.376	216.774	2.26999 + 2	1.70263 + 2	2.24031 - 1	3.6480 - 1	2.9780 - 1
11100	11081	216.650	-56.500	216.650	2.23460	1.67609	2.20538	3.5932	2.9332
11200	11180	216.650	-56.500	216.650	2.19976	1.64996	2.17100	3.5372	2.8875
11300	11280	216.650	-56.500	216.650	2.16547	1.62423	2.13715	3.4820	2.8425
11400	11380	216.650	-56.500	216.650	2.13171	1.59891	2.10383	3.4277	2.7982
11500	11479	216.650	-56.500	216.650	2.09848	1.57399	2.07103	3.3743	2.7545
11600	11579	216.650	-56.500	216.650	2.06576	1.54945	2.03875	3.3217	2.7116
11700	11679	216.650	-56.500	216.650	2.03356	1.52530	2.00697	3.2699	2.6693
11800	11778	216.650	-56.500	216.650	2.00186	1.50152	1.97568	3.2189	2.6277
11900	11878	216.650	-56.500	216.650	1.97066	1.47812	1.94489	3.1688	2.5868
12000	11977	216.650	-56.500	216.650	1.93994 + 2	1.45508 + 2	1.91457 - 1	3.1194 - 1	2.5464 - 1
12100	12077	216.650	-56.500	216.650	1.90970	1.43240	1.88473	3.0708	2.5067
12200	12177	216.650	-56.500	216.650	1.87994	1.41007	1.85536	3.0229	2.4677
12300	12276	216.650	-56.500	216.650	1.85064	1.38809	1.82644	2.9758	2.4292
12400	12376	216.650	-56.500	216.650	1.82180	1.36646	1.79797	2.9294	2.3914
12500	12475	216.650	-56.500	216.650	1.79341	1.34517	1.76995	2.8838	2.3541
12600	12575	216.650	-56.500	216.650	1.76546	1.32420	1.74237	2.8388	2.3174
12700	12675	216.650	-56.500	216.650	1.73795	1.30357	1.71522	2.7946	2.2813
12800	12774	216.650	-56.500	216.650	1.71086	1.28325	1.68849	2.7510	2.2457
12900	12874	216.650	-56.500	216.650	1.68420	1.26326	1.66218	2.7082	2.2107
13000	12973	216.650	-56.500	216.650	1.65796 + 2	1.24357 + 2	1.63628 - 1	2.6660 - 1	2.1763 - 1
13100	13073	216.650	-56.500	216.650	1.63213	1.22420	1.61078	2.6244	2.1424
13200	13173	216.650	-56.500	216.650	1.60670	1.20512	1.58569	2.5835	2.1090
13300	13272	216.650	-56.500	216.650	1.58166	1.18634	1.56098	2.5433	2.0761
13400	13372	216.650	-56.500	216.650	1.55702	1.16786	1.53666	2.5037	2.0438
13500	13471	216.650	-56.500	216.650	1.53276	1.14967	1.51272	2.4646	2.0120
13600	13571	216.650	-56.500	216.650	1.50888	1.13176	1.48915	2.4262	1.9806
13700	13671	216.650	-56.500	216.650	1.48538	1.11412	1.46595	2.3884	1.9498
13800	13770	216.650	-56.500	216.650	1.46224	1.09677	1.44312	2.3512	1.9194
13900	13870	216.650	-56.500	216.650	1.43946	1.07968	1.42063	2.3146	1.8895
14000	13969	216.650	-56.500	216.650	1.41704 + 2	1.06286 + 2	1.39851 - 1	2.2786 - 1	1.8600 - 1
14100	14069	216.650	-56.500	216.650	1.39496	1.04631	1.37672	2.2431	1.8311
14200	14168	216.650	-56.500	216.650	1.37323	1.03001	1.35528	2.2081	1.8026
14300	14268	216.650	-56.500	216.650	1.35184	1.01397	1.33417	2.1737	1.7745
14400	14367	216.650	-56.500	216.650	1.33079	9.98174 + 1	1.31339	2.1399	1.7468
14500	14467	216.650	-56.500	216.650	1.31006	9.82628	1.29293	2.1065	1.7196
14600	14567	216.650	-56.500	216.650	1.28966	9.67324	1.27279	2.0737	1.6928
14700	14666	216.650	-56.500	216.650	1.26957	9.52259	1.25297	2.0414	1.6665
14800	14766	216.650	-56.500	216.650	1.24980	9.37429	1.23346	2.0097	1.6405
14900	14865	216.650	-56.500	216.650	1.23034	9.22831	1.21425	1.9784	1.6150
15000	14965	216.650	-56.500	216.650	1.21118 + 2	9.08460 + 1	1.19534 - 1	1.9475 - 1	1.5898 - 1
15100	15064	216.650	-56.500	216.650	1.19232	8.94313	1.17673	1.9172	1.5651
15200	15164	216.650	-56.500	216.650	1.17375	8.80388	1.15840	1.8874	1.5407
15300	15263	216.650	-56.500	216.650	1.15548	8.66679	1.14037	1.8580	1.5167
15400	15363	216.650	-56.500	216.650	1.13749	8.53185	1.12261	1.8291	1.4931
15500	15462	216.650	-56.500	216.650	1.11978	8.39901	1.10513	1.8006	1.4699
15600	15562	216.650	-56.500	216.650	1.10234	8.26824	1.08793	1.7725	1.4470
15700	15661	216.650	-56.500	216.650	1.08518	8.13951	1.07099	1.7449	1.4244
15800	15761	216.650	-56.500	216.650	1.06828	8.01279	1.05431	1.7178	1.4023
15900	15860	216.650	-56.500	216.650	1.05165	7.88805	1.03790	1.6910	1.3804
16000	15960	216.650	-56.500	216.650	1.03528 + 2	7.76525 + 1	1.02174 - 1	1.6647 - 1	1.3589 - 1
16100	16059	216.650	-56.500	216.650	1.01916	7.64436	1.00584	1.6388	1.3378
16200	16159	216.650	-56.500	216.650	1.00330	7.52537	9.90180 - 2	1.6133	1.3170
16300	16258	216.650	-56.500	216.650	9.87682 + 1	7.40823	9.74767	1.5882	1.2965
16400	16358	216.650	-56.500	216.650	9.72309	7.29291	9.59594	1.5634	1.2763
16500	16457	216.650	-56.500	216.650	9.57175	7.17940	9.44658	1.5391	1.2564
16600	16557	216.650	-56.500	216.650	9.42276	7.06765	9.29954	1.5152	1.2369
16700	16656	216.650	-56.500	216.650	9.27611	6.95765	9.15481	1.4916	1.2176
16800	16756	216.650	-56.500	216.650	9.13174	6.84936	9.01232	1.4684	1.1987
16900	16855	216.650	-56.500	216.650	8.98962	6.74277	8.87206	1.4455	1.1800
17000	16955	216.650	-56.500	216.650	8.84971 + 1	6.63783 + 1	8.73399 - 2	1.4230 - 1	1.1616 - 1
17100	17054	216.650	-56.500	216.650	8.71199	6.53453	8.59807	1.4009	1.1436
17200	17154	216.650	-56.500	216.650	8.57642	6.43284	8.46427	1.3791	1.1258
17300	17253	216.650	-56.500	216.650	8.44296	6.33274	8.33255	1.3576	1.1083
17400	17352	216.650	-56.500	216.650	8.31158	6.23420	8.20289	1.3365	1.0910
17500	17452	216.650	-56.500	216.650	8.18225	6.13719	8.07525	1.3157	1.0740
17600	17551	216.650	-56.500	216.650	8.05493	6.04170	7.94960	1.2952	1.0573
17700	17651	216.650	-56.500	216.650	7.92961	5.94769	7.82591	1.2751	1.0409
17800	17750	216.650	-56.500	216.650	7.80623	5.85515	7.70415	1.2552	1.0247
17900	17850	216.650	-56.500	216.650	7.68478	5.76406	7.58429	1.2357	1.0087
18000	17949	216.650	-56.500	216.650	7.56522 + 1	5.67438 + 1	7.46629 - 2	1.2165 - 1	9.9304 - 2
18100	18049	216.650	-56.500	216.650	7.44752	5.58610	7.35014	1.1975	9.7759
18200	18148	216.650	-56.500	216.650	7.33166	5.49920	7.23579	1.1789	9.6238
18300	18247	216.650	-56.500	216.650	7.21761	5.41365	7.12323	1.1606	9.4741
18400	18347	216.650	-56.500	216.650	7.10533	5.32944	7.01242	1.1425	9.3267
18500	18446	216.650	-56.500	216.650	6.99481	5.24654	6.90334	1.1247	9.1816
18600	18546	216.650	-56.500	216.650	6.88600	5.16493	6.79596	1.1073	9.0388
18700	18645	216.650	-56.500	216.650	6.77889	5.08459	6.69025	1.0900	8.8982
18800	18745	216.650	-56.500	216.650	6.67345	5.00550	6.58619	1.0731	8.7598
18900	18844	216.650	-56.500	216.650	6.56966	4.92765	6.48375	1.0564	8.6236

TABLE I.—Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
19000	19057	216.650	-56.500	216.650	6.40999 + 1	4.80788 + 1	6.32616 - 2	1.0307 - 1	8.4140 - 2
19100	19158	216.650	-56.500	216.650	6.30970	4.73267	6.22719	1.0146	8.2823
19200	19258	216.650	-56.500	216.650	6.21098	4.65862	6.12977	9.9871 - 2	8.1527
19300	19359	216.650	-56.500	216.650	6.11381	4.58574	6.03386	9.8309	8.0252
19400	19459	216.650	-56.500	216.650	6.01816	4.51399	5.93946	9.6771	7.8996
19500	19560	216.650	-56.500	216.650	5.92401	4.44337	5.84654	9.5257	7.7760
19600	19661	216.650	-56.500	216.650	5.83132	4.37385	5.75507	9.3766	7.6544
19700	19761	216.650	-56.500	216.650	5.74009	4.30542	5.66503	9.2299	7.5346
19800	19862	216.650	-56.500	216.650	5.65029	4.23806	5.57640	9.0855	7.4168
19900	19963	216.650	-56.500	216.650	5.56189	4.17176	5.48916	8.9434	7.3007
20000	20063	216.650	-56.500	216.650	5.47487 + 1	4.10649 + 1	5.40328 - 2	8.8035 - 2	7.1865 - 2
20100	20164	216.750	-56.400	216.750	5.38924	4.04226	5.31876	8.6618	7.0708
20200	20264	216.850	-56.300	216.850	5.30498	3.97906	5.23561	8.5224	6.9571
20300	20365	216.950	-56.200	216.950	5.22208	3.91688	5.15379	8.3854	6.8452
20400	20466	217.050	-56.100	217.050	5.14051	3.85570	5.07329	8.2506	6.7352
20500	20566	217.150	-56.000	217.150	5.06025	3.79550	4.99408	8.1180	6.6270
20600	20667	217.250	-55.900	217.250	4.98128	3.73627	4.91614	7.9877	6.5205
20700	20768	217.350	-55.800	217.350	4.90358	3.67799	4.83945	7.8594	6.4159
20800	20868	217.450	-55.700	217.450	4.82712	3.62064	4.76400	7.7333	6.3129
20900	20969	217.550	-55.600	217.550	4.75189	3.56421	4.68976	7.6093	6.2117
21000	21070	217.650	-55.500	217.650	4.67787 + 1	3.50869 + 1	4.61670 - 2	7.4873 - 2	6.1121 - 2
21100	21170	217.750	-55.400	217.750	4.60504	3.45406	4.54482	7.3674	6.0142
21200	21271	217.850	-55.300	217.850	4.53337	3.40031	4.47409	7.2494	5.9179
21300	21372	217.950	-55.200	217.950	4.46285	3.34741	4.40449	7.1333	5.8231
21400	21472	218.050	-55.100	218.050	4.39345	3.29536	4.33600	7.0192	5.7300
21500	21573	218.150	-55.000	218.150	4.32517	3.24414	4.26861	6.9069	5.6383
21600	21674	218.250	-54.900	218.250	4.25798	3.19375	4.20230	6.7965	5.5482
21700	21774	218.350	-54.800	218.350	4.19186	3.14415	4.13705	6.6879	5.4595
21800	21875	218.450	-54.700	218.450	4.12680	3.09536	4.07284	6.5811	5.3723
21900	21976	218.550	-54.600	218.550	4.06278	3.04733	4.00965	6.4761	5.2866
22000	22076	218.650	-54.500	218.650	3.99978 + 1	3.00008 + 1	3.94747 - 2	6.3727 - 2	5.2022 - 2
22100	22177	218.750	-54.400	218.750	3.93778	2.95358	3.88629	6.2711	5.1192
22200	22278	218.850	-54.300	218.850	3.87678	2.90782	3.82608	6.1711	5.0376
22300	22379	218.950	-54.200	218.950	3.81674	2.86279	3.76683	6.0728	4.9574
22400	22479	219.050	-54.100	219.050	3.75766	2.81848	3.70852	5.9760	4.8784
22500	22580	219.150	-54.000	219.150	3.69953	2.77487	3.65115	5.8809	4.8007
22600	22681	219.250	-53.900	219.250	3.64231	2.73196	3.59468	5.7873	4.7243
22700	22781	219.350	-53.800	219.350	3.58601	2.68973	3.53912	5.6952	4.6492
22800	22882	219.450	-53.700	219.450	3.53061	2.64817	3.48444	5.6047	4.5753
22900	22983	219.550	-53.600	219.550	3.47608	2.60727	3.43062	5.5156	4.5026
23000	23084	219.650	-53.500	219.650	3.42242 + 1	2.56703 + 1	3.37767 - 2	5.4280 - 2	4.4310 - 2
23100	23184	219.750	-53.400	219.750	3.36961	2.52742	3.32555	5.3418	4.3607
23200	23285	219.850	-53.300	219.850	3.31765	2.48844	3.27426	5.2570	4.2915
23300	23386	219.950	-53.200	219.950	3.26650	2.45008	3.22379	5.1737	4.2234
23400	23486	220.050	-53.100	220.050	3.21617	2.41232	3.17411	5.0916	4.1564
23500	23587	220.150	-53.000	220.150	3.16663	2.37517	3.12523	5.0109	4.0905
23600	23688	220.250	-52.900	220.250	3.11788	2.33861	3.07711	4.9315	4.0257
23700	23789	220.350	-52.800	220.350	3.06991	2.30262	3.02976	4.8534	3.9620
23800	23889	220.450	-52.700	220.450	3.02269	2.26720	2.98316	4.7766	3.8993
23900	23990	220.550	-52.600	220.550	2.97622	2.23235	2.93730	4.7011	3.8376
24000	24091	220.650	-52.500	220.650	2.93048 + 1	2.19804 + 1	2.89216 - 2	4.6267 - 2	3.7769 - 2
24100	24192	220.750	-52.400	220.750	2.88547	2.16428	2.84774	4.5536	3.7172
24200	24292	220.850	-52.300	220.850	2.84117	2.13105	2.80401	4.4816	3.6585
24300	24393	220.950	-52.200	220.950	2.79756	2.09835	2.76098	4.4109	3.6007
24400	24494	221.050	-52.100	221.050	2.75485	2.06616	2.71863	4.3412	3.5439
24500	24595	221.150	-52.000	221.150	2.71241	2.03448	2.67694	4.2727	3.4880
24600	24696	221.250	-51.900	221.250	2.67084	2.00330	2.63592	4.2054	3.4329
24700	24796	221.350	-51.800	221.350	2.62993	1.97261	2.59554	4.1391	3.3788
24800	24897	221.450	-51.700	221.450	2.58966	1.94240	2.55580	4.0739	3.3256
24900	24998	221.550	-51.600	221.550	2.55002	1.91268	2.51668	4.0097	3.2732
25000	25099	221.650	-51.500	221.650	2.51101 + 1	1.88341 + 1	2.47818 - 2	3.9466 - 2	3.2217 - 2
25100	25200	221.750	-51.400	221.750	2.47262	1.85461	2.44028	3.8845	3.1710
25200	25300	221.850	-51.300	221.850	2.43482	1.82627	2.40298	3.8234	3.1211
25300	25401	221.950	-51.200	221.950	2.39762	1.79837	2.36627	3.7633	3.0720
25400	25502	222.050	-51.100	222.050	2.36101	1.77090	2.33013	3.7041	3.0238
25500	25603	222.150	-51.000	222.150	2.32497	1.74387	2.29457	3.6459	2.9763
25600	25704	222.250	-50.900	222.250	2.28950	1.71726	2.25956	3.5887	2.9295
25700	25804	222.350	-50.800	222.350	2.25458	1.69107	2.22510	3.5324	2.8836
25800	25905	222.450	-50.700	222.450	2.22021	1.66530	2.19118	3.4770	2.8383
25900	26006	222.550	-50.600	222.550	2.18638	1.63992	2.15779	3.4224	2.7938
26000	26107	222.650	-50.500	222.650	2.15308 + 1	1.61495 + 1	2.12493 - 2	3.3688 - 2	2.7500 - 2
26100	26208	222.750	-50.400	222.750	2.12031	1.59036	2.09258	3.3160	2.7070
26200	26308	222.850	-50.300	222.850	2.08804	1.56616	2.06074	3.2641	2.6646
26300	26409	222.950	-50.200	222.950	2.05628	1.54234	2.02939	3.2130	2.6229
26400	26510	223.050	-50.100	223.050	2.02502	1.51889	1.99854	3.1628	2.5818
26500	26611	223.150	-50.000	223.150	1.99425	1.49581	1.96817	3.1133	2.5415
26600	26712	223.250	-49.900	223.250	1.96396	1.47309	1.93828	3.0646	2.5017
26700	26813	223.350	-49.800	223.350	1.93414	1.45072	1.90885	3.0168	2.4627
26800	26913	223.450	-49.700	223.450	1.90479	1.42871	1.87988	2.9696	2.4242
26900	27014	223.550	-49.600	223.550	1.87589	1.40704	1.85136	2.9233	2.3864

TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
19000	18943	216.650	-56.500	216.650	6.46748 + 1	4.85101 + 1	6.38291 - 2	1.0400 - 1	8.4894 - 2
19100	19043	216.650	-56.500	216.650	6.36689	4.77556	6.28364	1.0238	8.3574
19200	19142	216.650	-56.500	216.650	6.26788	4.70129	6.18591	1.0079	8.2274
19300	19242	216.650	-56.500	216.650	6.17040	4.62818	6.08971	9.9219 - 2	8.0995
19400	19341	216.650	-56.500	216.650	6.07445	4.55621	5.99501	9.7676	7.9735
19500	19440	216.650	-56.500	216.650	5.97998	4.48536	5.90179	9.6157	7.8495
19600	19540	216.650	-56.500	216.650	5.88699	4.41561	5.81001	9.4661	7.7275
19700	19639	216.650	-56.500	216.650	5.79545	4.34695	5.71967	9.3190	7.6073
19800	19739	216.650	-56.500	216.650	5.70534	4.27936	5.63073	9.1740	7.4890
19900	19838	216.650	-56.500	216.650	5.61663	4.21282	5.54318	9.0314	7.3726
20000	19937	216.650	-56.500	216.650	5.52930 + 1	4.14732 + 1	5.45700 - 2	8.8910 - 2	7.2579 - 2
20100	20037	216.687	-56.463	216.687	5.44334	4.08284	5.37216	8.7513	7.1439
20200	20136	216.786	-56.364	216.786	5.35874	4.01939	5.28867	8.6113	7.0297
20300	20235	216.885	-56.265	216.885	5.27550	3.95695	5.20651	8.4737	6.9173
20400	20335	216.985	-56.165	216.985	5.19360	3.89552	5.12568	8.3383	6.8068
20500	20434	217.084	-56.066	217.084	5.11300	3.83506	5.04614	8.2051	6.6981
20600	20533	217.183	-55.967	217.183	5.03369	3.77558	4.96786	8.0742	6.5912
20700	20633	217.283	-55.867	217.283	4.95565	3.71704	4.89085	7.9454	6.4860
20800	20732	217.382	-55.768	217.382	4.87886	3.65945	4.81506	7.8187	6.3826
20900	20832	217.481	-55.669	217.481	4.80329	3.60276	4.74048	7.6940	6.2809
21000	20931	217.581	-55.569	217.581	4.72893 + 1	3.54699 + 1	4.66709 - 2	7.5715 - 2	6.1808 - 2
21100	21030	217.680	-55.470	217.680	4.65576	3.49211	4.59488	7.4509	6.0824
21200	21130	217.780	-55.370	217.780	4.58376	3.43810	4.52382	7.3323	5.9856
21300	21229	217.879	-55.271	217.879	4.51289	3.38495	4.45388	7.2157	5.8904
21400	21328	217.978	-55.172	217.978	4.44317	3.33265	4.38507	7.1010	5.7967
21500	21428	218.078	-55.072	218.078	4.37455	3.28118	4.31735	6.9881	5.7046
21600	21527	218.177	-54.973	218.177	4.30702	3.23053	4.25070	6.8771	5.6140
21700	21626	218.276	-54.874	218.276	4.24057	3.18069	4.18512	6.7679	5.5248
21800	21725	218.375	-54.775	218.375	4.17518	3.13164	4.12058	6.6605	5.4372
21900	21825	218.475	-54.675	218.475	4.11082	3.08337	4.05707	6.5549	5.3509
22000	21924	218.574	-54.576	218.574	4.04749 + 1	3.03587 + 1	3.99456 - 2	6.4510 - 2	5.2661 - 2
22100	22023	218.673	-54.477	218.673	3.98517	2.98912	3.93305	6.3488	5.1827
22200	22123	218.773	-54.377	218.773	3.92383	2.94311	3.87252	6.2482	5.1006
22300	22222	218.872	-54.278	218.872	3.86346	2.89784	3.81294	6.1493	5.0198
22400	22321	218.971	-54.179	218.971	3.80406	2.85328	3.75431	6.0520	4.9404
22500	22421	219.071	-54.079	219.071	3.74559	2.80942	3.69661	5.9563	4.8623
22600	22520	219.170	-53.980	219.170	3.68805	2.76627	3.63982	5.8621	4.7854
22700	22619	219.269	-53.881	219.269	3.63143	2.72379	3.58394	5.7695	4.7098
22800	22719	219.369	-53.781	219.369	3.57569	2.68199	3.52893	5.6784	4.6354
22900	22818	219.468	-53.682	219.468	3.52084	2.64085	3.47480	5.5887	4.5622
23000	22917	219.567	-53.583	219.567	3.46686 + 1	2.60036 + 1	3.42153 - 2	5.5006 - 2	4.4903 - 2
23100	23016	219.666	-53.484	219.666	3.41373	2.56051	3.36909	5.4138	4.4194
23200	23116	219.766	-53.384	219.766	3.36144	2.52129	3.31748	5.3285	4.3498
23300	23215	219.865	-53.285	219.865	3.30997	2.48268	3.26669	5.2445	4.2813
23400	23314	219.964	-53.186	219.964	3.25932	2.44469	3.21670	5.1619	4.2138
23500	23413	220.063	-53.087	220.063	3.20947	2.40730	3.16750	5.0807	4.1475
23600	23513	220.163	-52.987	220.163	3.16040	2.37050	3.11908	5.0008	4.0823
23700	23612	220.262	-52.888	220.262	3.11211	2.33427	3.07141	4.9221	4.0181
23800	23711	220.361	-52.789	220.361	3.06457	2.29862	3.02450	4.8448	3.9549
23900	23810	220.460	-52.690	220.460	3.01779	2.26353	2.97833	4.7687	3.8928
24000	23910	220.560	-52.590	220.560	2.97174 + 1	2.22899 + 1	2.93288 - 2	4.6938 - 2	3.8317 - 2
24100	24009	220.659	-52.491	220.659	2.92642	2.19499	2.88815	4.6201	3.7715
24200	24108	220.758	-52.392	220.758	2.88180	2.16153	2.84412	4.5476	3.7124
24300	24207	220.857	-52.293	220.857	2.83789	2.12859	2.80078	4.4763	3.6541
24400	24307	220.957	-52.193	220.957	2.79467	2.09618	2.75813	4.4062	3.5969
24500	24406	221.056	-52.094	221.056	2.75213	2.06427	2.71614	4.3372	3.5405
24600	24505	221.155	-51.995	221.155	2.71025	2.03286	2.67481	4.2692	3.4851
24700	24604	221.254	-51.896	221.254	2.66904	2.00194	2.63413	4.2024	3.4306
24800	24704	221.354	-51.796	221.354	2.62847	1.97151	2.59409	4.1367	3.3769
24900	24803	221.453	-51.697	221.453	2.58853	1.94156	2.55468	4.0720	3.3241
25000	24902	221.552	-51.598	221.552	2.54922 + 1	1.91207 + 1	2.51588 - 2	4.0084 - 2	3.2722 - 2
25100	25001	221.651	-51.499	221.651	2.51052	1.88305	2.47769	3.9458	3.2210
25200	25100	221.750	-51.400	221.750	2.47243	1.85448	2.44010	3.8842	3.1707
25300	25200	221.850	-51.300	221.850	2.43494	1.82635	2.40310	3.8236	3.1213
25400	25299	221.949	-51.201	221.949	2.39803	1.79867	2.36667	3.7639	3.0726
25500	25398	222.048	-51.102	222.048	2.36170	1.77142	2.33081	3.7052	3.0247
25600	25497	222.147	-51.003	222.147	2.32593	1.74459	2.29552	3.6475	2.9775
25700	25597	222.246	-50.903	222.246	2.29073	1.71819	2.26077	3.5907	2.9312
25800	25696	222.346	-50.804	222.346	2.25607	1.69219	2.22657	3.5348	2.8855
25900	25795	222.445	-50.705	222.445	2.22196	1.66660	2.19290	3.4798	2.8406
26000	25894	222.544	-50.606	222.544	2.18837 + 1	1.64141 + 1	2.15976 - 2	3.4257 - 2	2.7965 - 2
26100	25993	222.643	-50.507	222.643	2.15531	1.61662	2.12713	3.3724	2.7530
26200	26092	222.742	-50.408	222.742	2.12277	1.59221	2.09501	3.3200	2.7102
26300	26192	222.842	-50.308	222.842	2.09073	1.56817	2.06339	3.2684	2.6681
26400	26291	222.941	-50.209	222.941	2.05919	1.54452	2.03226	3.2177	2.6267
26500	26390	223.040	-50.110	223.040	2.02814	1.52123	2.00161	3.1678	2.5859
26600	26489	223.139	-50.011	223.139	1.99757	1.49830	1.97145	3.1186	2.5458
26700	26588	223.238	-49.912	223.238	1.96747	1.47573	1.94175	3.0703	2.5064
26800	26687	223.337	-49.813	223.337	1.93785	1.45351	1.91251	3.0227	2.4675
26900	26787	223.437	-49.713	223.437	1.90868	1.43163	1.88372	2.9759	2.4293



TABLE I.—Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
27000	27115	223.650	-49.500	223.650	1.84745 + 1	1.38570 + 1	1.82329 - 2	2.8777 - 2	2.3491 - 2
27100	27216	223.750	-49.400	223.750	1.81945	1.36470	1.79566	2.8328	2.3125
27200	27317	223.850	-49.300	223.850	1.79189	1.34403	1.76845	2.7886	2.2764
27300	27418	223.950	-49.200	223.950	1.76475	1.32367	1.74168	2.7452	2.2410
27400	27519	224.050	-49.100	224.050	1.73804	1.30364	1.71531	2.7024	2.2061
27500	27620	224.150	-49.000	224.150	1.71175	1.28392	1.68936	2.6604	2.1717
27600	27720	224.250	-48.900	224.250	1.68586	1.26450	1.66382	2.6190	2.1379
27700	27821	224.350	-48.800	224.350	1.66038	1.24539	1.63867	2.5782	2.1047
27800	27922	224.450	-48.700	224.450	1.63529	1.22657	1.61391	2.5381	2.0719
27900	28023	224.550	-48.600	224.550	1.61060	1.20805	1.58953	2.4987	2.0397
28000	28124	224.650	-48.500	224.650	1.58628 + 1	1.18981 + 1	1.56554 - 2	2.4599 - 2	2.0081 - 2
28100	28225	224.750	-48.400	224.750	1.56235	1.17186	1.54192	2.4217	1.9769
28200	28326	224.850	-48.300	224.850	1.53878	1.15418	1.51866	2.3841	1.9462
28300	28427	224.950	-48.200	224.950	1.51559	1.13678	1.49577	2.3471	1.9160
28400	28527	225.050	-48.100	225.050	1.49275	1.11965	1.47323	2.3107	1.8863
28500	28628	225.150	-48.000	225.150	1.47026	1.10279	1.45104	2.2749	1.8571
28600	28729	225.250	-47.900	225.250	1.44813	1.08618	1.42919	2.2396	1.8283
28700	28830	225.350	-47.800	225.350	1.42633	1.06984	1.40768	2.2050	1.8000
28800	28931	225.450	-47.700	225.450	1.40488	1.05375	1.38651	2.1708	1.7721
28900	29032	225.550	-47.600	225.550	1.38375	1.03790	1.36566	2.1372	1.7447
29000	29133	225.650	-47.500	225.650	1.36296 + 1	1.02230 + 1	1.34514 - 2	2.1042 - 2	1.7177 - 2
29100	29234	225.750	-47.400	225.750	1.34248	1.00694	1.32493	2.0717	1.6912
29200	29335	225.850	-47.300	225.850	1.32232	9.91825 + 0	1.30503	2.0397	1.6650
29300	29436	225.950	-47.200	225.950	1.30248	9.76939	1.28545	2.0082	1.6393
29400	29537	226.050	-47.100	226.050	1.28294	9.62281	1.26616	1.9771	1.6140
29500	29638	226.150	-47.000	226.150	1.26370	9.47851	1.24717	1.9466	1.5891
29600	29738	226.250	-46.900	226.250	1.24476	9.33643	1.22848	1.9166	1.5646
29700	29839	226.350	-46.800	226.350	1.22610	9.19654	1.21007	1.8871	1.5405
29800	29940	226.450	-46.700	226.450	1.20774	9.05881	1.19195	1.8580	1.5167
29900	30041	226.550	-46.600	226.550	1.18966	8.92321	1.17411	1.8294	1.4934
30000	30142	226.650	-46.500	226.650	1.17186 + 1	8.78968 + 0	1.15654 - 2	1.8012 - 2	1.4704 - 2
30100	30243	226.750	-46.400	226.750	1.15433	8.65821	1.13924	1.7735	1.4477
30200	30344	226.850	-46.300	226.850	1.13708	8.52877	1.12221	1.7462	1.4255
30300	30445	226.950	-46.200	226.950	1.12008	8.40132	1.10544	1.7193	1.4035
30400	30546	227.050	-46.100	227.050	1.10335	8.27583	1.08892	1.6929	1.3820
30500	30647	227.150	-46.000	227.150	1.08688	8.15226	1.07267	1.6669	1.3607
30600	30748	227.250	-45.900	227.250	1.07066	8.03060	1.05666	1.6413	1.3398
30700	30849	227.350	-45.800	227.350	1.05469	7.91080	1.04090	1.6161	1.3193
30800	30950	227.450	-45.700	227.450	1.03896	7.79284	1.02537	1.5913	1.2990
30900	31051	227.550	-45.600	227.550	1.02348	7.67669	1.01009	1.5669	1.2791
31000	31152	227.650	-45.500	227.650	1.00823 + 1	7.56232 + 0	9.95043 - 3	1.5429 - 2	1.2595 - 2
31100	31253	227.750	-45.400	227.750	9.93213 + 0	7.44971	9.80225	1.5192	1.2402
31200	31354	227.850	-45.300	227.850	9.78429	7.33882	9.65634	1.4960	1.2212
31300	31455	227.950	-45.200	227.950	9.63871	7.22963	9.51267	1.4731	1.2025
31400	31556	228.050	-45.100	228.050	9.49536	7.12211	9.37120	1.4505	1.1841
31500	31657	228.150	-45.000	228.150	9.35421	7.01623	9.23188	1.4283	1.1660
31600	31758	228.250	-44.900	228.250	9.21521	6.91197	9.09470	1.4065	1.1481
31700	31859	228.350	-44.800	228.350	9.07834	6.80931	8.95962	1.3850	1.1306
31800	31960	228.450	-44.700	228.450	8.94356	6.70822	8.82661	1.3638	1.1133
31900	32061	228.550	-44.600	228.550	8.81084	6.60867	8.69562	1.3430	1.0963
32000	32162	228.650	-44.500	228.650	8.68014 + 0	6.51064 + 0	8.56663 - 3	1.3225 - 2	1.0796 - 2
32100	32263	228.750	-44.400	228.750	8.54290	6.41920	8.43473	1.2805	1.0453
32200	32364	228.850	-44.300	228.850	8.41776	6.33383	8.30782	1.2399	1.0121
32300	32465	228.950	-44.200	228.950	8.29445	6.25433	8.18464	1.2007	9.8014 - 3
32400	32566	229.050	-44.100	229.050	8.17290	6.17980	8.06400	1.1628	9.4922
32500	32667	229.150	-44.000	229.150	8.05335	6.10625	7.94846	1.1262	9.1934
32600	32768	229.250	-43.900	229.250	7.93580	6.03470	7.83440	1.0908	8.9048
32700	32869	229.350	-43.800	229.350	7.81925	5.96415	7.72145	1.0567	8.6258
32800	32970	229.450	-43.700	229.450	7.70470	5.89460	7.61040	1.0236	8.3563
32900	33071	229.550	-43.600	229.550	7.59115	5.82505	7.50185	9.9173 - 3	8.0957
33000	33172	229.650	-43.500	229.650	7.47860	5.75650	7.39430		
33100	33273	229.750	-43.400	229.750	7.36705	5.68795	7.28380		
33200	33374	229.850	-43.300	229.850	7.25650	5.61940	7.17430		
33300	33475	229.950	-43.200	229.950	7.14695	5.55085	7.06580		
33400	33576	230.050	-43.100	230.050	7.03840	5.48230	6.95830		
33500	33677	230.150	-43.000	230.150	6.93085	5.41375	6.85180		
33600	33778	230.250	-42.900	230.250	6.82430	5.34520	6.74630		
33700	33879	230.350	-42.800	230.350	6.71875	5.27665	6.64180		
33800	33980	230.450	-42.700	230.450	6.61420	5.20810	6.53830		
33900	34081	230.550	-42.600	230.550	6.51065	5.13955	6.43580		
34000	34182	230.650	-42.500	230.650	6.40810	5.07100	6.33430		
34100	34283	230.750	-42.400	230.750	6.30655	5.00245	6.23380		
34200	34384	230.850	-42.300	230.850	6.20600	4.93390	6.13430		
34300	34485	230.950	-42.200	230.950	6.10645	4.86535	6.03580		
34400	34586	231.050	-42.100	231.050	6.00790	4.79680	5.93730		
34500	34687	231.150	-42.000	231.150	5.91035	4.72825	5.83980		
34600	34788	231.250	-41.900	231.250	5.81380	4.65970	5.74230		
34700	34889	231.350	-41.800	231.350	5.71825	4.59115	5.64580		
34800	34990	231.450	-41.700	231.450	5.62370	4.52260	5.54930		
34900	35091	231.550	-41.600	231.550	5.53015	4.45405	5.45380		
35000	35192	231.650	-41.500	231.650	5.43760	4.38550	5.35930		
35100	35293	231.750	-41.400	231.750	5.34605	4.31695	5.26580		
35200	35394	231.850	-41.300	231.850	5.25550	4.24840	5.17330		
35300	35495	231.950	-41.200	231.950	5.16595	4.17985	5.08180		
35400	35596	232.050	-41.100	232.050	5.07740	4.11130	4.99130		
35500	35697	232.150	-41.000	232.150	4.98985	4.04275	4.90180		
35600	35798	232.250	-40.900	232.250	4.90330	3.97420	4.81330		
35700	35899	232.350	-40.800	232.350	4.81775	3.90565	4.72580		
35800	35900	232.450	-40.700	232.450	4.73320	3.83710	4.63930		
35900	36001	232.550	-40.600	232.550	4.64965	3.76855	4.55380		
36000	36102	232.650	-40.500	232.650	4.56710	3.70000	4.46930		
36100	36203	232.750	-40.400	232.750	4.48555	3.63145	4.38580		
36200	36304	232.850	-40.300	232.850	4.40400	3.56290	4.30330		
36300	36405	232.950	-40.200	232.950	4.32345	3.49435	4.22180		
36400	36506	233.050	-40.100	233.050	4.24390	3.42580	4.14130		
36500	36607	233.150	-40.000	233.150	4.16535	3.35725	4.06180		
36600	36708	233.250	-39.900	233.250	4.08780	3.28870	3.98330		
36700	36809	233.350	-39.800	233.350	4.01125	3.22015	3.90580		
36800	36910	233.450	-39.700	233.450	3.93570	3.15160	3.82930		
36900	37011	233.550	-39.600	233.550	3.86115	3.08305	3.75380		
37000	37112	233.650	-39.500	233.650	3.78760	3.01450	3.67930		
37100	37213	233.750	-39.400	233.750	3.71505	2.94595	3.60580		
37200	37314	233.850	-39.300	233.850	3.64350	2.87740	3.53330		
37300	37415	233.950	-39.200	233.950	3.57295	2.80885	3.46180		
37400	37516	234.050	-39.100	234.050	3.50340	2.74030	3.39130		
37500	37617	234.150	-39.000	234.150	3.43485	2.67175	3.32180		
37600	37718	234.250	-38.900	234.250	3.36730				

TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
27000	26886	223.536	-49.614	223.536	1.87997 + 1	1.41009 + 1	1.85539 - 2	2.9298 - 2	2.3917 - 2
27100	26985	223.635	-49.515	223.635	1.85170	1.38889	1.82749	2.8845	2.3547
27200	27084	223.734	-49.416	223.734	1.82387	1.36802	1.80002	2.8399	2.3183
27300	27183	223.833	-49.317	223.833	1.79648	1.34747	1.77298	2.7960	2.2824
27400	27282	223.932	-49.218	223.932	1.76950	1.32723	1.74636	2.7528	2.2472
27500	27382	224.032	-49.118	224.032	1.74294	1.30732	1.72015	2.7103	2.2125
27600	27481	224.131	-49.019	224.131	1.71680	1.28770	1.69435	2.6684	2.1783
27700	27580	224.230	-48.920	224.230	1.69106	1.26840	1.66894	2.6273	2.1447
27800	27679	224.329	-48.821	224.329	1.66571	1.24939	1.64393	2.5867	2.1116
27900	27778	224.428	-48.722	224.428	1.64076	1.23067	1.61931	2.5469	2.0791
28000	27877	224.527	-48.623	224.527	1.61619 + 1	1.21225 + 1	1.59506 - 2	2.5076 - 2	2.0470 - 2
28100	27976	224.626	-48.524	224.626	1.59201	1.19410	1.57119	2.4690	2.0155
28200	28075	224.725	-48.425	224.725	1.56819	1.17624	1.54769	2.4310	1.9845
28300	28175	224.825	-48.325	224.825	1.54474	1.15865	1.52454	2.3936	1.9540
28400	28274	224.924	-48.226	224.924	1.52166	1.14134	1.50176	2.3568	1.9239
28500	28373	225.023	-48.127	225.023	1.49893	1.12429	1.47933	2.3206	1.8943
28600	28472	225.122	-48.028	225.122	1.47655	1.10750	1.45724	2.2849	1.8652
28700	28571	225.221	-47.929	225.221	1.45451	1.09097	1.43549	2.2498	1.8366
28800	28670	225.320	-47.830	225.320	1.43282	1.07470	1.41408	2.2153	1.8084
28900	28769	225.419	-47.731	225.419	1.41145	1.05868	1.39300	2.1813	1.7806
29000	28868	225.518	-47.632	225.518	1.39042 + 1	1.04290 + 1	1.37224 - 2	2.1478 - 2	1.7533 - 2
29100	28967	225.617	-47.533	225.617	1.36971	1.02737	1.35180	2.1149	1.7265
29200	29066	225.716	-47.434	225.716	1.34931	1.01207	1.33167	2.0825	1.7000
29300	29166	225.816	-47.334	225.816	1.32923	9.97007 + 0	1.31185	2.0506	1.6740
29400	29265	225.915	-47.235	225.915	1.30946	9.82176	1.29234	2.0192	1.6484
29500	29364	226.014	-47.136	226.014	1.28999	9.67573	1.27312	1.9883	1.6231
29600	29463	226.113	-47.037	226.113	1.27082	9.53194	1.25420	1.9579	1.5983
29700	29562	226.212	-46.938	226.212	1.25194	9.39035	1.23557	1.9280	1.5739
29800	29661	226.311	-46.839	226.311	1.23336	9.25093	1.21723	1.8985	1.5498
29900	29760	226.410	-46.740	226.410	1.21505	9.11364	1.19916	1.8696	1.5262
30000	29859	226.509	-46.641	226.509	1.19703 + 1	8.97846 + 0	1.18138 - 2	1.8410 - 2	1.5029 - 2
30100	29958	226.608	-46.542	226.608	1.17928	8.84534	1.16386	1.8129	1.4799
30200	30057	226.707	-46.443	226.707	1.16180	8.71425	1.14661	1.7853	1.4574
30300	30156	226.806	-46.344	226.806	1.14459	8.58517	1.12963	1.7581	1.4352
30400	30255	226.905	-46.245	226.905	1.12765	8.45805	1.11290	1.7313	1.4133
30500	30354	227.004	-46.146	227.004	1.11096	8.33288	1.09643	1.7049	1.3918
30600	30453	227.103	-46.047	227.103	1.09453	8.20962	1.08021	1.6790	1.3706
30700	30552	227.202	-45.948	227.202	1.07834	8.08824	1.06424	1.6534	1.3497
30800	30651	227.301	-45.849	227.301	1.06241	7.96871	1.04851	1.6283	1.3292
30900	30751	227.400	-45.749	227.400	1.04671	7.85099	1.03303	1.6035	1.3090
31000	30850	227.500	-45.650	227.500	1.03126 + 1	7.73508 + 0	1.01777 - 2	1.5792 - 2	1.2891 - 2
31100	30949	227.599	-45.551	227.599	1.01604	7.62092	1.00275	1.5552	1.2695
31200	31048	227.698	-45.452	227.698	1.00105	7.50851	9.87962 - 3	1.5316	1.2503
31300	31147	227.797	-45.353	227.797	9.86292 + 0	7.39780	9.73395	1.5083	1.2313
31400	31246	227.896	-45.254	227.896	9.71757	7.28878	9.59049	1.4855	1.2126
31500	31345	227.995	-45.155	227.995	9.57442	7.18141	9.44922	1.4629	1.1942
31600	31444	228.094	-45.056	228.094	9.43345	7.07567	9.31009	1.4408	1.1761
31700	31543	228.193	-44.957	228.193	9.29462	6.97154	9.17307	1.4190	1.1583
31800	31642	228.292	-44.858	228.292	9.15789	6.86899	9.03814	1.3975	1.1408
31900	31741	228.391	-44.759	228.391	9.02323	6.76798	8.90524	1.3763	1.1235
32000	31840	228.490	-44.660	228.490	8.89063 + 0	6.66852 + 0	8.77437 - 3	1.3555 - 2	1.1065 - 2
32100	31939	228.589	-44.561	228.589	8.75940	6.57408	8.64853	1.3345	1.0730
32200	32038	228.688	-44.462	228.688	8.63023	6.48569	8.52065	1.3131	1.0393
32300	32137	228.787	-44.363	228.787	8.50105	6.39730	8.39730	1.2916	1.0067
32400	32236	228.886	-44.264	228.886	8.37188	6.30891	8.26801	1.2701	9.7518 - 3
32500	32335	228.985	-44.165	228.985	8.24270	6.22052	8.13812	1.2486	9.4474
32600	32434	229.084	-44.066	229.084	8.11352	6.13213	8.00823	1.2271	9.1332
32700	32533	229.183	-43.967	229.183	7.98434	6.04374	7.87834	1.2056	8.8190
32800	32632	229.282	-43.868	229.282	7.85516	5.95535	7.74835	1.1841	8.5048
32900	32731	229.381	-43.769	229.381	7.72598	5.86696	7.61836	1.1626	8.1906
33000	32830	229.480	-43.670	229.480	7.59679	5.77857	7.48837	1.1411	7.8764
33100	32929	229.579	-43.571	229.579	7.46761	5.69018	7.35838	1.1196	7.5622
33200	33028	229.678	-43.472	229.678	7.33842	5.60179	7.22839	1.0981	7.2480
33300	33127	229.777	-43.373	229.777	7.20924	5.51340	7.09840	1.0766	6.9338
33400	33226	229.876	-43.274	229.876	7.07995	5.42501	6.96841	1.0551	6.6196
33500	33325	229.975	-43.175	229.975	6.95077	5.33662	6.83842	1.0336	6.3054
33600	33424	230.074	-43.076	230.074	6.82158	5.24823	6.70843	1.0121	5.9912
33700	33523	230.173	-42.977	230.173	6.69239	5.15984	6.57844	9.9524 - 3	5.6770
33800	33622	230.272	-42.878	230.272	6.56320	5.07145	6.44845	9.8224 - 3	5.3628
33900	33721	230.371	-42.779	230.371	6.43401	4.98306	6.31846	9.6924 - 3	5.0486
34000	33820	230.470	-42.680	230.470	6.30482	4.89467	6.18847	9.5624 - 3	4.7344
34100	33919	230.569	-42.581	230.569	6.17563	4.80628	6.05848	9.4324 - 3	4.4202
34200	34018	230.668	-42.482	230.668	6.04644	4.71789	5.92849	9.3024 - 3	4.1060
34300	34117	230.767	-42.383	230.767	5.91725	4.62950	5.79850	9.1724 - 3	3.7918
34400	34216	230.866	-42.284	230.866	5.78806	4.54111	5.66851	9.0424 - 3	3.4776
34500	34315	230.965	-42.185	230.965	5.65887	4.45272	5.53852	8.9124 - 3	3.1634
34600	34414	231.064	-42.086	231.064	5.52968	4.36433	5.40853	8.7824 - 3	2.8492
34700	34513	231.163	-41.987	231.163	5.40049	4.27594	5.27854	8.6524 - 3	2.5350
34800	34612	231.262	-41.888	231.262	5.27130	4.18755	5.14855	8.5224 - 3	2.2208
34900	34711	231.361	-41.789	231.361	5.14211	4.09916	5.01856	8.3924 - 3	1.9066
35000	34810	231.460	-41.690	231.460	5.01292	4.01077	4.88857	8.2624 - 3	1.5924
35100	34909	231.559	-41.591	231.559	4.88373	3.92238	4.75858	8.1324 - 3	1.2782
35200	35008	231.658	-41.492	231.658	4.75454	3.83399	4.62859	8.0024 - 3	0.9640
35300	35107	231.757	-41.393	231.757	4.62535	3.74560	4.49860	7.8724 - 3	0.6498
35400	35206	231.856	-41.294	231.856	4.49616	3.65721	4.36861	7.7424 - 3	0.3356
35500	35305	231.955	-41.195	231.955	4.36697	3.56882	4.23862	7.6124 - 3	0.0214
35600	35404	232.054	-41.096	232.054	4.23778	3.48043	4.10863	7.4824 - 3	0.0000
35700	35503	232.153	-40.997	232.153	4.10859	3.39204	3.97864	7.3524 - 3	0.0000
35800	35602	232.252	-40.898	232.252	3.97940	3.30365	3.84865	7.2224 - 3	0.0000
35900	35701	232.351	-40.799	232.351	3.85021	3.21526	3.71866	7.0924 - 3	0.0000
36000	35800	232.450	-40.700	232.450	3.72102	3.12687	3.58867	6.9624 - 3	0.0000
36100	35899	232.549	-40.601	232.549	3.59183	3.03848	3.45868	6.8324 - 3	0.0000
36200	35998	232.648	-40.502	232.648	3.46264	2.95009	3.32869	6.7024 - 3	0.0000
36300	36097	232.747	-40.403	232.747	3.33345	2.86170	3.19870	6.5724 - 3	0.0000
36400	36196	232.846	-40.304	232.846	3.20426	2.77331	3.06871	6.4424 - 3	0.0000
36500	36295	232.945	-40.205	232.945	3.07507	2.68492	2.93872	6.3124 - 3	0.0000
36600	36394	233.044	-40.106	233.044	2.94588	2.59653	2.80873	6.1824 - 3	0.0000
36700	36493	233.143	-40.007	233.143	2.81669	2.50814	2.67874	6.0524 - 3	0.0000
36800	36592	233.242	-39.908	233.242	2.68750	2.41975	2.54875	5.9224 - 3	0.0000
36900	36691	233.341	-39.809	233.341	2.55831	2.33136	2.41876	5.7924 - 3	0.0000
37000	36790	233.							

TABLE I.—Continued  
 GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
38000	38229	245.450	-27.700	245.450	3.65452 + 0	2.74112 + 0	3.60674 - 3	5.1869 - 3	4.2342 - 3
38200	38431	246.010	-27.140	246.010	3.55431	2.66595	3.50783	5.0332	4.1087
38400	38633	246.570	-26.580	246.570	3.45706	2.59301	3.41185	4.8843	3.9872
38600	38836	247.130	-26.020	247.130	3.36268	2.52222	3.31871	4.7402	3.8696
38800	39038	247.690	-25.460	247.690	3.27109	2.45352	3.22831	4.6007	3.7557
39000	39241	248.250	-24.900	248.250	3.18218	2.38683	3.14057	4.4655	3.6453
39200	39443	248.810	-24.340	248.810	3.09589	2.32211	3.05541	4.3347	3.5385
39400	39646	249.370	-23.780	249.370	3.01212	2.25928	2.97273	4.2079	3.4350
39600	39848	249.930	-23.220	249.930	2.93080	2.19828	2.89248	4.0851	3.3348
39800	40051	250.490	-22.660	250.490	2.85185	2.13906	2.81456	3.9662	3.2377
40000	40253	251.050	-22.100	251.050	2.77520 + 0	2.08157 + 0	2.73891 - 3	3.8510 - 3	3.1437 - 3
40200	40456	251.610	-21.540	251.610	2.70077	2.02574	2.66545	3.7394	3.0525
40400	40658	252.170	-20.980	252.170	2.62849	1.97153	2.59412	3.6312	2.9643
40600	40861	252.730	-20.420	252.730	2.55830	1.91889	2.52485	3.5264	2.8787
40800	41064	253.290	-19.860	253.290	2.49014	1.86776	2.45758	3.4249	2.7958
41000	41266	253.850	-19.300	253.850	2.42394	1.81810	2.39224	3.3265	2.7155
41200	41469	254.410	-18.740	254.410	2.35964	1.76987	2.32878	3.2311	2.6376
41400	41671	254.970	-18.180	254.970	2.29717	1.72302	2.26713	3.1387	2.5622
41600	41874	255.530	-17.620	255.530	2.23650	1.67751	2.20725	3.0491	2.4890
41800	42077	256.090	-17.060	256.090	2.17755	1.63330	2.14908	2.9622	2.4181
42000	42279	256.650	-16.500	256.650	2.12028 + 0	1.59034 + 0	2.09256 - 3	2.8780 - 3	2.3494 - 3
42200	42482	257.210	-15.940	257.210	2.06464	1.54861	2.03764	2.7964	2.2828
42400	42685	257.770	-15.380	257.770	2.01058	1.50806	1.98428	2.7172	2.2181
42600	42887	258.330	-14.820	258.330	1.95804	1.46865	1.93243	2.6405	2.1555
42800	43090	258.890	-14.260	258.890	1.90698	1.43035	1.88205	2.5661	2.0948
43000	43293	259.450	-13.700	259.450	1.85737	1.39314	1.83308	2.4939	2.0359
43200	43496	260.010	-13.140	260.010	1.80914	1.35697	1.78548	2.4239	1.9787
43400	43698	260.570	-12.580	260.570	1.76227	1.32181	1.73922	2.3561	1.9233
43600	43901	261.130	-12.020	261.130	1.71671	1.28764	1.69426	2.2902	1.8696
43800	44104	261.690	-11.460	261.690	1.67242	1.25442	1.65055	2.2264	1.8174
44000	44307	262.250	-10.900	262.250	1.62936 + 0	1.22212 + 0	1.60806 - 3	2.1644 - 3	1.7669 - 3
44200	44510	262.810	-10.340	262.810	1.58750	1.19073	1.56674	2.1043	1.7178
44400	44712	263.370	-9.780	263.370	1.54681	1.16020	1.52658	2.0460	1.6702
44600	44915	263.930	-9.220	263.930	1.50723	1.13052	1.48752	1.9894	1.6240
44800	45118	264.490	-8.660	264.490	1.46876	1.10166	1.44955	1.9345	1.5792
45000	45321	265.050	-8.100	265.050	1.43134	1.07359	1.41262	1.8813	1.5357
45200	45524	265.610	-7.540	265.610	1.39495	1.04630	1.37671	1.8296	1.4935
45400	45727	266.170	-6.980	266.170	1.35956	1.01975	1.34178	1.7794	1.4526
45600	45930	266.730	-6.420	266.730	1.32514	9.93936 - 1	1.30781	1.7307	1.4128
45800	46132	267.290	-5.860	267.290	1.29166	9.68825	1.27477	1.6835	1.3743
46000	46335	267.850	-5.300	267.850	1.25909 + 0	9.44398 - 1	1.24263 - 3	1.6376 - 3	1.3368 - 3
46200	46538	268.410	-4.740	268.410	1.22741	9.20636	1.21136	1.5931	1.3005
46400	46741	268.970	-4.180	268.970	1.19660	8.97520	1.18095	1.5498	1.2652
46600	46944	269.530	-3.620	269.530	1.16661	8.75031	1.15136	1.5078	1.2309
46800	47147	270.090	-3.060	270.090	1.13744	8.53150	1.12257	1.4671	1.1976
47000	47350	270.650	-2.500	270.650	1.10905	8.31859	1.09455	1.4275	1.1653
47200	47553	270.650	-2.500	270.650	1.08141	8.11122	1.06727	1.3919	1.1363
47400	47756	270.650	-2.500	270.650	1.05445	7.90901	1.04066	1.3572	1.1079
47600	47959	270.650	-2.500	270.650	1.02816	7.71184	1.01472	1.3234	1.0803
47800	48162	270.650	-2.500	270.650	1.00253	7.51959	9.89420 - 4	1.2904	1.0534
48000	48365	270.650	-2.500	270.650	9.77537 - 1	7.33213 - 1	9.64754 - 4	1.2582 - 3	1.0271 - 3
48200	48568	270.650	-2.500	270.650	9.53168	7.14935	9.40704	1.2269	1.0015
48400	48771	270.650	-2.500	270.650	9.29406	6.97112	9.17253	1.1963	9.7656 - 4
48600	48974	270.650	-2.500	270.650	9.06237	6.79733	8.94386	1.1665	9.5222
48800	49178	270.650	-2.500	270.650	8.83645	6.62788	8.72090	1.1374	9.2848
49000	49381	270.650	-2.500	270.650	8.61616	6.46265	8.50349	1.1090	9.0533
49200	49584	270.650	-2.500	270.650	8.40137	6.30154	8.29150	1.0814	8.8276
49400	49787	270.650	-2.500	270.650	8.19193	6.14445	8.08480	1.0544	8.6076
49600	49990	270.650	-2.500	270.650	7.98771	5.99127	7.88325	1.0281	8.3930
49800	50193	270.650	-2.500	270.650	7.78858	5.84192	7.68673	1.0025	8.1838
50000	50396	270.650	-2.500	270.650	7.59442 - 1	5.69628 - 1	7.49511 - 4	9.7752 - 4	7.9797 - 4
50500	50904	270.650	-2.500	270.650	7.12992	5.34788	7.03668	9.1773	7.4917
51000	51413	270.650	-2.500	270.650	6.69383	5.02079	6.60630	8.6160	7.0335
51500	51921	270.650	-2.500	270.650	6.28442	4.71370	6.20224	8.0890	6.6033
52000	52429	270.650	-2.500	270.650	5.90005	4.42540	5.82289	7.5943	6.1994
52500	52937	269.650	-3.500	269.650	5.53853	4.15424	5.46610	7.1554	5.8411
53000	53446	268.650	-4.500	268.650	5.19795	3.89878	5.12998	6.7404	5.5023
53500	53954	267.650	-5.500	267.650	4.87716	3.65817	4.81338	6.3480	5.1820
54000	54463	266.650	-6.500	266.650	4.57507	3.43158	4.51524	5.9772	4.8793
54500	54971	265.650	-7.500	265.650	4.29066	3.21826	4.23456	5.6267	4.5932
55000	55480	264.650	-8.500	264.650	4.02297 - 1	3.01747 - 1	3.97036 - 4	5.2956 - 4	4.3229 - 4
55500	55989	263.650	-9.500	263.650	3.77105	2.82852	3.72173	4.9828	4.0676
56000	56498	262.650	-10.500	262.650	3.53404	2.65075	3.48782	4.6874	3.8264
56500	57007	261.650	-11.500	261.650	3.31110	2.48353	3.26780	4.4085	3.5988
57000	57516	260.650	-12.500	260.650	3.10146	2.32628	3.06090	4.1452	3.3838
57500	58025	259.650	-13.500	259.650	2.90435	2.17844	2.86637	3.8967	3.1810
58000	58534	258.650	-14.500	258.650	2.71909	2.03948	2.68353	3.6623	2.9896
58500	59043	257.650	-15.500	257.650	2.54499	1.90890	2.51171	3.4411	2.8090
59000	59553	256.650	-16.500	256.650	2.38143	1.78622	2.35029	3.2325	2.6388
59500	60062	255.650	-17.500	255.650	2.22780	1.67099	2.19867	3.0358	2.4782



TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
38000	37774	244.818	-28.332	244.818	3.77138 + 0	2.82877 + 0	3.72206 - 3	5.3666 - 3	4.3809 - 3
38200	37972	245.371	-27.779	245.371	3.66891	2.75191	3.62093	5.2090	4.2522
38400	38169	245.924	-27.226	245.924	3.56945	2.67731	3.52277	5.0564	4.1276
38600	38367	246.478	-26.672	246.478	3.47291	2.60489	3.42749	4.9086	4.0070
38800	38565	247.031	-26.119	247.031	3.37919	2.53460	3.33500	4.7654	3.8901
39000	38762	247.584	-25.566	247.584	3.28821	2.46636	3.24521	4.6267	3.7769
39200	38960	248.137	-25.013	248.137	3.19988	2.40011	3.15803	4.4924	3.6673
39400	39157	248.690	-24.460	248.690	3.11411	2.33578	3.07339	4.3623	3.5610
39600	39355	249.243	-23.907	249.243	3.03084	2.27331	2.99120	4.2362	3.4581
39800	39552	249.797	-23.353	249.797	2.94997	2.21266	2.91139	4.1140	3.3584
40000	39750	250.350	-22.800	250.350	2.87143 + 0	2.15375 + 0	2.83389 - 3	3.9957 - 3	3.2618 - 3
40200	39947	250.903	-22.247	250.903	2.79516	2.09654	2.75861	3.8810	3.1681
40400	40145	251.456	-21.694	251.456	2.72108	2.04098	2.68550	3.7698	3.0774
40600	40342	252.008	-21.142	252.008	2.64913	1.98701	2.61448	3.6621	2.9894
40800	40540	252.561	-20.589	252.561	2.57923	1.93458	2.54550	3.5576	2.9042
41000	40737	253.114	-20.036	253.114	2.51133	1.88365	2.47849	3.4564	2.8216
41200	40935	253.667	-19.483	253.667	2.44536	1.83417	2.41338	3.3583	2.7415
41400	41132	254.220	-18.930	254.220	2.38126	1.78609	2.35012	3.2631	2.6638
41600	41329	254.773	-18.377	254.773	2.31899	1.73938	2.28866	3.1709	2.5885
41800	41527	255.325	-17.825	255.325	2.25847	1.69399	2.22894	3.0815	2.5155
42000	41724	255.878	-17.272	255.878	2.19967 + 0	1.64989 + 0	2.17090 - 3	2.9948 - 3	2.4447 - 3
42200	41922	256.431	-16.719	256.431	2.14252	1.60702	2.11450	2.9107	2.3761
42400	42119	256.983	-16.167	256.983	2.08698	1.56536	2.05969	2.8291	2.3095
42600	42316	257.536	-15.614	257.536	2.03299	1.52487	2.00641	2.7500	2.2449
42800	42514	258.088	-15.062	258.088	1.98052	1.48551	1.95462	2.6733	2.1823
43000	42711	258.641	-14.509	258.641	1.92951	1.44725	1.90428	2.5989	2.1215
43200	42908	259.193	-13.957	259.193	1.87992	1.41006	1.85534	2.5267	2.0626
43400	43106	259.746	-13.404	259.746	1.83172	1.37390	1.80776	2.4567	2.0055
43600	43303	260.298	-12.852	260.298	1.78485	1.33875	1.76151	2.3887	1.9500
43800	43500	260.851	-12.299	260.851	1.73927	1.30456	1.71653	2.3228	1.8962
44000	43697	261.403	-11.747	261.403	1.69496 + 0	1.27133 + 0	1.67280 - 3	2.2589 - 3	1.8440 - 3
44200	43895	261.955	-11.195	261.955	1.65187	1.23900	1.63027	2.1968	1.7933
44400	44092	262.508	-10.642	262.508	1.60996	1.20757	1.58891	2.1365	1.7441
44600	44289	263.060	-10.090	263.060	1.56921	1.17700	1.54869	2.0781	1.6964
44800	44486	263.612	-9.538	263.612	1.52957	1.14727	1.50957	2.0214	1.6501
45000	44684	264.164	-8.986	264.164	1.49101	1.11835	1.47151	1.9663	1.6051
45200	44881	264.716	-8.434	264.716	1.45351	1.09022	1.43450	1.9128	1.5615
45400	45078	265.268	-7.882	265.268	1.41702	1.06286	1.39849	1.8609	1.5191
45600	45275	265.820	-7.330	265.820	1.38153	1.03623	1.36347	1.8106	1.4780
45800	45472	266.373	-6.777	266.373	1.34700	1.01033	1.32939	1.7616	1.4381
46000	45669	266.925	-6.225	266.925	1.31340 + 0	9.85135 - 1	1.29623 - 3	1.7141 - 3	1.3993 - 3
46200	45867	267.476	-5.674	267.476	1.28072	9.60615	1.26397	1.6680	1.3617
46400	46064	268.028	-5.122	268.028	1.24891	9.36756	1.23257	1.6233	1.3251
46600	46261	268.580	-4.570	268.580	1.21795	9.13539	1.20202	1.5798	1.2896
46800	46458	269.132	-4.018	269.132	1.18783	8.90944	1.17229	1.5375	1.2551
47000	46655	269.684	-3.466	269.684	1.15851	8.68954	1.14336	1.4965	1.2216
47200	46852	270.236	-2.914	270.236	1.12988	8.47551	1.11520	1.4567	1.1891
47400	47049	270.788	-2.362	270.788	1.10220	8.26717	1.08779	1.4187	1.1581
47600	47246	271.340	-1.810	271.340	1.07512	8.06409	1.06106	1.3838	1.1297
47800	47443	271.892	-1.258	271.892	1.04871	7.86600	1.03500	1.3499	1.1019
48000	47640	272.444	-0.706	272.444	1.02296 + 0	7.67279 - 1	1.00958 - 3	1.3167 - 3	1.0749 - 3
48200	47837	272.996	-0.154	272.996	9.97830 - 1	7.48434	9.84782 - 4	1.2844	1.0485
48400	48034	273.548	-0.602	273.548	9.73324	7.30053	9.60597	1.2528	1.0227
48600	48231	274.100	-0.550	274.100	9.49422	7.12125	9.37006	1.2221	9.9759 - 4
48800	48428	274.652	-0.498	274.652	9.26107	6.94638	9.13997	1.1920	9.7310
49000	48625	275.204	-0.446	275.204	9.03367	6.77581	8.91554	1.1628	9.4920
49200	48822	275.756	-0.394	275.756	8.81186	6.60944	8.69663	1.1342	9.2590
49400	49019	276.308	-0.342	276.308	8.59552	6.44717	8.48311	1.1064	9.0316
49600	49216	276.860	-0.290	276.860	8.38449	6.28889	8.27485	1.0792	8.8099
49800	49413	277.412	-0.238	277.412	8.17867	6.13450	8.07172	1.0527	8.5936
50000	49610	277.964	-0.186	277.964	7.97790 - 1	5.98392 - 1	7.87358 - 4	1.0269 - 3	8.3827 - 4
50500	50102	278.516	-0.134	278.516	7.49734	5.62347	7.39930	9.6502 - 4	7.8777
51000	50594	279.068	-0.082	279.068	7.04580	5.28478	6.95366	9.0690	7.4033
51500	51086	279.620	-0.030	279.620	6.62151	4.96654	6.53492	8.5229	6.9575
52000	51578	280.172	0.022	280.172	6.22283	4.66751	6.14146	8.0097	6.5386
52500	52070	280.724	0.074	280.724	5.84821	4.38651	5.77173	7.5314	6.1481
53000	52562	281.276	0.126	281.276	5.49540	4.12189	5.42353	7.1029	5.7983
53500	53053	281.828	0.178	281.828	5.16275	3.87238	5.09524	6.6974	5.4673
54000	53545	282.380	0.230	282.380	4.84917	3.63718	4.78576	6.3137	5.1541
54500	54037	282.932	0.282	282.932	4.55364	3.41551	4.49409	5.9508	4.8578
55000	54528	283.484	0.334	283.484	4.27516 - 1	3.20664 - 1	4.21926 - 4	5.6075 - 4	4.5776 - 4
55500	55020	284.036	0.386	284.036	4.01282	3.00986	3.96034	5.2830	4.3126
56000	55511	284.588	0.438	284.588	3.76572	2.82452	3.71648	4.9762	4.0622
56500	56002	285.140	0.490	285.140	3.53304	2.65000	3.48684	4.6862	3.8254
57000	56493	285.692	0.542	285.692	3.31397	2.48568	3.27064	4.4121	3.6017
57500	56984	286.244	0.594	286.244	3.10777	2.33102	3.06713	4.1532	3.3903
58000	57476	286.796	0.646	286.796	2.91373	2.18548	2.87563	3.9086	3.1907
58500	57967	287.348	0.698	287.348	2.73116	2.04854	2.69544	3.6776	3.0021
59000	58457	287.900	0.750	287.900	2.55942	1.91972	2.52595	3.4594	2.8240
59500	58948	288.452	0.802	288.452	2.39792	1.79858	2.36656	3.2535	2.6559

TABLE I.—Concluded  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
H, m	Z, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
60000	60572	254.650	-18.500	254.650	2.08354 - 1	1.56278 - 1	2.05629 - 4	2.8503 - 4	2.3268 - 4
60500	61081	253.650	-19.500	253.650	1.94810	1.46120	1.92263	2.6756	2.1841
61000	61591	252.650	-20.500	252.650	1.82099	1.36585	1.79718	2.5109	2.0497
61500	62101	250.650	-22.500	250.650	1.70148	1.27622	1.67923	2.3648	1.9305
62000	62611	248.650	-24.500	248.650	1.58896	1.19182	1.56818	2.2262	1.8173
62500	63121	246.650	-26.500	246.650	1.48305	1.11238	1.46366	2.0947	1.7099
63000	63631	244.650	-28.500	244.650	1.38343	1.03766	1.36534	1.9699	1.6081
63500	64141	242.650	-30.500	242.650	1.28976	9.67402 - 2	1.27290	1.8517	1.5116
64000	64651	240.650	-32.500	240.650	1.20174	9.01379	1.18603	1.7397	1.4201
64500	65161	238.650	-34.500	238.650	1.11906	8.39367	1.10443	1.6335	1.3335
65000	65672	236.650	-36.500	236.650	1.04145 - 1	7.81153 - 2	1.02783 - 4	1.5331 - 4	1.2515 - 4
65500	66182	234.650	-38.500	234.650	9.68630 - 2	7.26533	9.55964 - 5	1.4381	1.1739
66000	66693	232.650	-40.500	232.650	9.00342	6.75312	8.88569	1.3482	1.1005
66500	67203	230.650	-42.500	230.650	8.36340	6.27307	8.25404	1.2632	1.0312
67000	67714	228.650	-44.500	228.650	7.76389	5.82340	7.66237	1.1829	9.6563 - 5
67500	68225	226.650	-46.500	226.650	7.20265	5.40243	7.10846	1.1071	9.0373
68000	68735	224.650	-48.500	224.650	6.67753	5.00856	6.59021	1.0355	8.4530
68500	69246	222.650	-50.500	222.650	6.18651	4.64027	6.10561	9.6797 - 5	7.9018
69000	69757	220.650	-52.500	220.650	5.72765	4.29609	5.65275	9.0430	7.3820
69500	70268	218.650	-54.500	218.650	5.29910	3.97465	5.22981	8.4429	6.8922
70000	70780	216.650	-56.500	216.650	4.89912 - 2	3.67464 - 2	4.83505 - 5	7.8777 - 5	6.4307 - 5
70500	71291	214.650	-58.500	214.650	4.52603	3.39480	4.46684	7.3456	5.9964
71000	71802	212.650	-60.500	212.650	4.17825	3.13395	4.12361	6.8449	5.5877
71500	72314	210.650	-62.500	210.650	3.85428	2.89095	3.80388	6.3741	5.2034
72000	72825	208.650	-64.500	208.650	3.55270	2.66474	3.50624	5.9317	4.8422
72500	73337	206.650	-66.500	206.650	3.27214	2.45431	3.22935	5.5161	4.5030
73000	73848	204.650	-68.500	204.650	3.01133	2.25869	2.97196	5.1261	4.1846
73500	74360	202.650	-70.500	202.650	2.76905	2.07696	2.73284	4.7602	3.8859
74000	74872	200.650	-72.500	200.650	2.54415	1.90827	2.51088	4.4171	3.6058
74500	75384	198.650	-74.500	198.650	2.33552	1.75179	2.30498	4.0958	3.3435
75000	75896	196.65	-76.50	196.65	2.1422 - 2	1.6067 - 2	2.1141 - 5	3.795 - 5	3.098 - 5
75500	76408	194.65	-78.50	194.65	1.9631	1.4724	1.9374	3.513	2.868
76000	76920	192.65	-80.50	192.65	1.7973	1.3481	1.7738	3.250	2.653
76500	77432	190.65	-82.50	190.65	1.6441	1.2331	1.6226	3.004	2.452
77000	77944	188.65	-84.50	188.65	1.5024	1.1269	1.4828	2.774	2.265
77500	78457	186.65	-86.50	186.65	1.3717	1.0289	1.3538	2.560	2.090
78000	78969	184.65	-88.50	184.65	1.2511	9.3843 - 3	1.2348	2.360	1.927
78500	79482	182.65	-90.50	182.65	1.1400	8.5508	1.1251	2.174	1.775
79000	79994	180.65	-92.50	180.65	1.0377	7.7834	1.0241	2.001	1.634
79500	80507	180.65	-92.50	180.65	9.4407 - 3	7.0811	9.3173 - 6	1.821	1.486
80000	81020	180.65	-92.50	180.65	8.5890 - 3	6.4422 - 3	8.4766 - 6	1.656 - 5	1.352 - 5
80500	81533	180.65	-92.50	180.65	7.8140	5.8610	7.7118	1.507	1.230
81000	82046	180.65	-92.50	180.65	7.1090	5.3322	7.0161	1.371	1.119
81500	82559	180.65	-92.50	180.65	6.4676	4.8511	6.3830	1.247	1.018
82000	83072	180.65	-92.50	180.65	5.8841	4.4134	5.8071	1.135	9.263 - 6
82500	83585	180.65	-92.50	180.65	5.3532	4.0152	5.2832	1.032	8.427
83000	84098	180.65	-92.50	180.65	4.8702	3.6530	4.8065	9.392 - 6	7.667
83500	84612	180.65	-92.50	180.65	4.4308	3.3234	4.3729	8.544	6.975
84000	85125	180.65	-92.50	180.65	4.0310	3.0235	3.9783	7.774	6.346
84500	85639	180.65	-92.50	180.65	3.6674	2.7507	3.6194	7.072	5.773
85000	86152	180.65	-92.50	180.65	3.3365 - 3	2.5026 - 3	3.2928 - 6	6.434 - 6	5.252 - 6
85500	86666	180.65	-92.50	180.65	3.0354	2.2768	2.9957	5.854	4.778
86000	87180	180.65	-92.50	180.65	2.7616	2.0714	2.7255	5.325	4.347
86500	87693	180.65	-92.50	180.65	2.5124	1.8845	2.4796	4.845	3.955
87000	88207	180.65	-92.50	180.65	2.2857	1.7144	2.2558	4.408	3.598
87500	88721	180.65	-92.50	180.65	2.0795	1.5598	2.0523	4.010	3.274
88000	89236	180.65	-92.50	180.65	1.8919	1.4190	1.8671	3.648	2.978
88500	89750	180.65	-92.50	180.65	1.7212	1.2910	1.6987	3.319	2.710
89000	90264	181.44	-91.71	181.44	1.5661	1.1746	1.5456	3.007	2.455
89500	90778	182.97	-90.18	182.98	1.4259	1.0695	1.4073	2.715	2.216
90000	91293	184.51	-88.64	184.53	1.2994 - 3	9.7459 - 4	1.2824 - 6	2.453 - 6	2.002 - 6

TABLE I. — Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
60000	59439	255.772	-17.378	255.772	2.24606 - 1	1.68469 - 1	2.21669 - 4	3.0592 - 4	2.4973 - 4
60500	59930	254.791	-18.359	254.791	2.10332	1.57762	2.07582	2.8758	2.3476
61000	60420	253.810	-19.340	253.810	1.96917	1.47700	1.94342	2.7028	2.2064
61500	60911	252.829	-20.321	252.829	1.84312	1.38246	1.81902	2.5396	2.0731
62000	61401	251.046	-22.104	251.046	1.72457	1.29353	1.70202	2.3931	1.9536
62500	61891	249.084	-24.066	249.084	1.61283	1.20972	1.59174	2.2557	1.8414
63000	62382	247.123	-26.027	247.123	1.50754	1.13075	1.48783	2.1252	1.7348
63500	62872	245.163	-27.987	245.163	1.40838	1.05637	1.38997	2.0013	1.6337
64000	63362	243.202	-29.948	243.202	1.31504	9.86364 - 2	1.29785	1.8837	1.5377
64500	63852	241.242	-31.908	241.242	1.22722	9.20492	1.21117	1.7722	1.4467
65000	64342	239.282	-33.868	239.282	1.14463 - 1	8.58545 - 2	1.12966 - 4	1.6665 - 4	1.3604 - 4
65500	64832	237.323	-35.827	237.323	1.06700	8.00317	1.05305	1.5663	1.2786
66000	65322	235.363	-37.787	235.363	9.94067 - 2	7.45612	9.81068 - 5	1.4713	1.2011
66500	65811	233.404	-39.746	233.404	9.25581	6.94243	9.13478	1.3815	1.1277
67000	66301	231.446	-41.704	231.446	8.61305	6.46032	8.50042	1.2944	1.0583
67500	66791	229.487	-43.663	229.487	8.01011	6.00807	7.90536	1.2160	9.9262 - 5
68000	67280	227.529	-45.621	227.529	7.44483	5.58408	7.34747	1.1399	9.3051
68500	67770	225.572	-47.578	225.572	6.91514	5.18678	6.82472	1.0680	8.7180
69000	68259	223.614	-49.536	223.614	6.41909	4.81471	6.33515	1.0000	8.1635
69500	68748	221.657	-51.493	221.657	5.95479	4.46646	5.87692	9.3589 - 5	7.6399
70000	69237	219.700	-53.450	219.700	5.52047 - 2	4.14069 - 2	5.44828 - 5	8.7535 - 5	7.1457 - 5
70500	69727	217.744	-55.406	217.744	5.11441	3.83613	5.04753	8.1825	6.6796
71000	70216	215.788	-57.362	215.788	4.73502	3.55156	4.67310	7.6442	6.2402
71500	70705	213.832	-59.318	213.832	4.38075	3.28583	4.32346	7.1370	5.8261
72000	71193	211.876	-61.274	211.876	4.05013	3.03785	3.99717	6.6593	5.4361
72500	71682	209.921	-63.229	209.921	3.74179	2.80658	3.69286	6.2096	5.0691
73000	72171	207.966	-65.184	207.966	3.45441	2.59102	3.40924	5.7866	4.7237
73500	72660	206.011	-67.139	206.011	3.18673	2.39025	3.14506	5.3888	4.3990
74000	73148	204.057	-69.093	204.057	2.93758	2.20336	2.89916	5.0151	4.0939
74500	73637	202.103	-71.047	202.103	2.70581	2.02953	2.67043	4.6641	3.8074
75000	74125	200.15	-73.00	200.15	2.4904 - 2	1.8679 - 2	2.4578 - 5	4.335 - 5	3.538 - 5
75500	74614	198.20	-74.95	198.20	2.2903	1.7178	2.2603	4.026	3.286
76000	75102	196.24	-76.91	196.24	2.1045	1.5785	2.0770	3.736	3.050
76500	75590	194.29	-78.86	194.29	1.9322	1.4493	1.9069	3.465	2.828
77000	76078	192.34	-80.81	192.34	1.7725	1.3295	1.7493	3.210	2.621
77500	76566	190.38	-82.77	190.38	1.6246	1.2186	1.6034	2.973	2.427
78000	77054	188.43	-84.72	188.43	1.4877	1.1159	1.4683	2.750	2.245
78500	77542	186.48	-86.67	186.48	1.3611	1.0209	1.3433	2.543	2.076
79000	78030	184.53	-88.62	184.53	1.2442	9.3322 - 3	1.2279	2.349	1.917
79500	78518	182.58	-90.57	182.58	1.1362	8.5223	1.1214	2.168	1.770
80000	79006	180.65	-92.50	180.65	1.0366 - 2	7.7752 - 3	1.0231 - 5	1.999 - 5	1.632 - 5
80500	79493	180.65	-92.50	180.65	9.4530 - 3	7.0903	9.3293 - 6	1.823	1.488
81000	79981	180.65	-92.50	180.65	8.6204	6.4658	8.5076	1.662	1.357
81500	80468	180.65	-92.50	180.65	7.8612	5.8964	7.7584	1.516	1.238
82000	80956	180.65	-92.50	180.65	7.1691	5.3772	7.0753	1.382	1.129
82500	81443	180.65	-92.50	180.65	6.5379	4.9038	6.4524	1.261	1.029
83000	81930	180.65	-92.50	180.65	5.9624	4.4722	5.8845	1.150	9.386 - 6
83500	82417	180.65	-92.50	180.65	5.4377	4.0786	5.3666	1.049	8.560
84000	82904	180.65	-92.50	180.65	4.9592	3.7197	4.8943	9.563 - 6	7.807
84500	83391	180.65	-92.50	180.65	4.5228	3.3924	4.4637	8.722	7.120
85000	83878	180.65	-92.50	180.65	4.1250 - 3	3.0940 - 3	4.0710 - 6	7.955 - 6	6.494 - 6
85500	84365	180.65	-92.50	180.65	3.7621	2.8218	3.7129	7.255	5.922
86000	84852	180.65	-92.50	180.65	3.4313	2.5737	3.3864	6.617	5.402
86500	85339	180.65	-92.50	180.65	3.1295	2.3474	3.0886	6.035	4.927
87000	85825	180.65	-92.50	180.65	2.8544	2.1410	2.8171	5.504	4.493
87500	86312	180.65	-92.50	180.65	2.6035	1.9528	2.5694	5.021	4.098
88000	86798	180.65	-92.50	180.65	2.3746	1.7811	2.3436	4.579	3.738
88500	87285	180.65	-92.50	180.65	2.1660	1.6246	2.1376	4.177	3.410
89000	87771	180.65	-92.50	180.65	1.9756	1.4819	1.9498	3.810	3.110
89500	88257	180.65	-92.50	180.65	1.8021	1.3517	1.7785	3.475	2.837
90000	88743	180.65	-92.50	180.65	1.6438 - 3	1.2329 - 3	1.6223 - 6	3.170 - 6	2.588 - 6



TABLE I.—Continued  
 GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
90000	88743	180.65	-92.50	180.65	1.6438 - 3	1.2329 - 3	1.6223 - 6	3.170 - 6	2.588 - 6
90500	89229	182.14	-91.01	182.15	1.5000	1.1251	1.4804	2.869	2.342
91000	89715	183.63	-89.52	183.65	1.3698	1.0274	1.3519	2.598	2.121
91500	90201	185.13	-88.02	185.15	1.2519	9.3898 - 4	1.2355	2.355	1.923
92000	90687	186.62	-86.53	186.65	1.1449	8.5877	1.1300	2.137	1.744
92500	91173	188.10	-85.05	188.15	1.0479	7.8599	1.0342	1.940	1.584
93000	91659	189.59	-83.56	189.65	9.5977 - 4	7.1989	9.4722 - 7	1.763	1.439
93500	92144	191.08	-82.07	191.15	8.7968	6.5981	8.6818	1.603	1.309
94000	92630	192.56	-80.59	192.65	8.0683	6.0517	7.9628	1.459	1.191
94500	93116	194.04	-79.11	194.15	7.4052	5.5544	7.3084	1.329	1.085
95000	93601	195.51	-77.64	195.65	6.8012 - 4	5.1013 - 4	6.7122 - 7	1.211 - 6	9.886 - 7
95500	94086	196.98	-76.17	197.15	6.2506	4.6883	6.1688	1.104	9.016
96000	94572	198.45	-74.70	198.65	5.7483	4.3116	5.6731	1.008	8.229
96500	95057	199.92	-73.23	200.15	5.2897	3.9676	5.2206	9.207 - 7	7.516
97000	95542	201.37	-71.78	201.65	4.8709	3.6535	4.8072	8.415	6.869
97500	96027	202.83	-70.32	203.15	4.4880	3.3663	4.4293	7.696	6.283
98000	96512	204.28	-68.87	204.65	4.1377	3.1036	4.0836	7.044	5.750
98500	96997	205.72	-67.43	206.15	3.8171	2.8631	3.7672	6.450	5.266
99000	97482	207.16	-65.99	207.65	3.5235	2.6428	3.4774	5.911	4.825
99500	97966	208.60	-64.55	209.15	3.2543	2.4409	3.2117	5.420	4.425
100000	98451	210.02	-63.13	210.65	3.0075 - 4	2.2558 - 4	2.9681 - 7	4.974 - 7	4.060 - 7
101000	99420	214.86	-58.29	215.65	2.5748	1.9312	2.5411	4.159	3.395
102000	100389	219.66	-53.49	220.65	2.2123	1.6594	2.1834	3.493	2.851
103000	101357	224.43	-48.72	225.65	1.9074	1.4307	1.8825	2.945	2.404
104000	102326	229.18	-43.97	230.65	1.6500	1.2376	1.6284	2.492	2.034
105000	103294	233.90	-39.25	235.65	1.4318	1.0739	1.4131	2.117	1.728
106000	104261	238.58	-34.57	240.65	1.2462	9.3475 - 5	1.2299	1.804	1.473
107000	105228	243.23	-29.92	245.65	1.0879	8.1596	1.0736	1.543	1.259
108000	106195	247.85	-25.30	250.65	9.5225 - 5	7.1425	9.3980 - 8	1.323	1.080
109000	107162	252.44	-20.71	255.65	8.3578	6.2689	8.2485	1.139	9.297 - 8
110000	108129	257.00	-16.15	260.65	7.3544 - 5	5.5163 - 5	7.2582 - 8	9.829 - 8	8.024 - 8
111000	109095	266.44	-6.71	270.65	6.4951	4.8717	6.4101	8.360	6.825
112000	110060	275.85	2.70	280.65	5.7623	4.3220	5.6869	7.153	5.839
113000	111026	285.20	12.05	290.65	5.1338	3.8507	5.0666	6.153	5.023
114000	111991	294.52	21.37	300.65	4.5919	3.4442	4.5319	5.321	4.343
115000	112956	303.78	30.63	310.65	4.1224	3.0921	4.0685	4.623	3.774
116000	113921	313.01	39.86	320.65	3.7137	2.7855	3.6651	4.035	3.294
117000	114885	322.19	49.04	330.65	3.3563	2.5175	3.3125	3.536	2.887
118000	115849	331.33	58.18	340.65	3.0426	2.2822	3.0029	3.112	2.540
119000	116813	340.43	67.28	350.65	2.7662	2.0748	2.7300	2.748	2.243
120000	117776	349.49	76.34	360.65	2.5217 - 5	1.8914 - 5	2.4887 - 8	2.436 - 8	1.988 - 8
121000	118739	368.19	95.04	380.65	2.3074	1.7307	2.2772	2.112	1.724
122000	119702	386.83	113.68	400.65	2.1210	1.5909	2.0933	1.844	1.506
123000	120665	405.40	132.25	420.65	1.9578	1.4684	1.9322	1.621	1.324
124000	121627	423.90	150.75	440.65	1.8139	1.3605	1.7901	1.434	1.171
125000	122589	442.35	169.20	460.65	1.6863	1.2648	1.6642	1.275	1.041
126000	123551	460.73	187.58	480.65	1.5726	1.1795	1.5520	1.140	9.304 - 9
127000	124512	479.07	205.92	500.65	1.4707	1.1031	1.4515	1.023	8.354
128000	125473	497.36	224.21	520.65	1.3791	1.0344	1.3611	9.228 - 9	7.533
129000	126434	515.60	242.45	540.65	1.2964	9.7239 - 6	1.2795	8.353	6.819
130000	127394	533.80	260.65	560.65	1.2214 - 5	9.1613 - 6	1.2054 - 8	7.589 - 9	6.195 - 9
131000	128354	551.97	278.82	580.65	1.1532	8.6495	1.1381	6.919	5.648
132000	129314	570.09	296.94	600.65	1.0909	8.1823	1.0766	6.327	5.165
133000	130274	588.19	315.04	620.65	1.0339	7.7546	1.0203	5.803	4.737
134000	131233	606.26	333.11	640.65	9.8151 - 6	7.3619	9.6867 - 9	5.337	4.357
135000	132192	624.30	351.15	660.65	9.3330	7.0004	9.2110	4.921	4.017
136000	133151	642.32	369.17	680.65	8.8882	6.6667	8.7719	4.549	3.714
137000	134109	660.32	387.17	700.65	8.4766	6.3580	8.3658	4.215	3.441
138000	135067	678.31	405.16	720.65	8.0950	6.0718	7.9892	3.913	3.194
139000	136025	696.27	423.12	740.65	7.7405	5.8058	7.6393	3.641	2.972
140000	136983	714.22	441.07	760.65	7.4104 - 6	5.5582 - 6	7.3135 - 9	3.394 - 9	2.770 - 9
141000	137940	732.16	459.01	780.65	7.1025	5.3273	7.0096	3.170	2.587
142000	138897	750.08	476.93	800.65	6.8148	5.1115	6.7257	2.965	2.421
143000	139853	767.98	494.83	820.65	6.5455	4.9095	6.4599	2.779	2.268
144000	140810	785.87	512.72	840.65	6.2931	4.7202	6.2108	2.608	2.129
145000	141766	803.74	530.59	860.65	6.0560	4.5424	5.9768	2.451	2.001
146000	142721	821.60	548.45	880.65	5.8331	4.3752	5.7568	2.307	1.884
147000	143677	839.43	566.28	900.65	5.6232	4.2177	5.5496	2.175	1.776
148000	144632	857.24	584.09	920.65	5.4252	4.0693	5.3543	2.053	1.676
149000	145587	875.03	601.88	940.65	5.2384	3.9291	5.1699	1.940	1.584
150000	146541	892.79	619.64	960.65	5.0617 - 6	3.7966 - 6	4.9955 - 9	1.836 - 9	1.498 - 9
151000	147496	905.88	632.73	975.65	4.8941	3.6709	4.8301	1.747	1.427
152000	148450	918.94	645.79	990.65	4.7345	3.5512	4.6726	1.665	1.359
153000	149403	931.97	658.82	1005.65	4.5825	3.4371	4.5225	1.587	1.296
154000	150357	944.98	671.83	1020.65	4.4375	3.3284	4.3795	1.515	1.236
155000	151310	957.94	684.79	1035.65	4.2992	3.2246	4.2429	1.446	1.181
156000	152263	970.88	697.73	1050.65	4.1671	3.1256	4.1126	1.382	1.128
157000	153215	983.78	710.63	1065.65	4.0409	3.0309	3.9880	1.321	1.078
158000	154167	996.64	723.49	1080.65	3.9202	2.9404	3.8690	1.264	1.032
159000	155119	1009.45	736.30	1095.65	3.8048	2.8538	3.7550	1.210	9.876 - 10

TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
160000	156071	1022.23	749.08	1110.65	3.6943 - 6	2.7709 - 6	3.6460 - 9	1.159 - 9	9.459 -10
161000	157022	1030.37	757.22	1120.65	3.5882	2.6914	3.5413	1.115	9.106
162000	157973	1038.49	765.34	1130.65	3.4861	2.6148	3.4405	1.074	8.768
163000	158924	1046.59	773.44	1140.65	3.3878	2.5411	3.3435	1.035	8.446
164000	159874	1054.67	781.52	1150.65	3.2932	2.4701	3.2501	9.970 -10	8.139
165000	160825	1062.74	789.59	1160.65	3.2019	2.4017	3.1601	9.611	7.845
166000	161775	1070.81	797.66	1170.65	3.1140	2.3357	3.0733	9.267	7.565
167000	162724	1078.90	805.75	1180.65	3.0293	2.2721	2.9897	8.938	7.297
168000	163673	1087.01	813.86	1190.65	2.9475	2.2108	2.9090	8.624	7.040
169000	164622	1095.17	822.02	1200.65	2.8687	2.1517	2.8312	8.323	6.795
170000	165571	1105.51	832.36	1210.65	2.7926 - 6	2.0946 - 6	2.7561 - 9	8.036 -10	6.560 -10
171000	166520	1110.62	837.47	1217.65	2.7191	2.0395	2.6835	7.779	6.350
172000	167468	1115.73	842.58	1224.65	2.6479	1.9861	2.6133	7.532	6.149
173000	168416	1120.82	847.67	1231.65	2.5790	1.9344	2.5453	7.295	5.955
174000	169363	1125.90	852.75	1238.65	2.5123	1.8844	2.4794	7.066	5.768
175000	170310	1130.97	857.82	1245.65	2.4477	1.8359	2.4157	6.845	5.588
176000	171257	1136.02	862.87	1252.65	2.3851	1.7890	2.3539	6.633	5.415
177000	172204	1141.07	867.92	1259.65	2.3245	1.7435	2.2941	6.429	5.248
178000	173150	1146.10	872.95	1266.65	2.2657	1.6994	2.2361	6.231	5.087
179000	174097	1151.12	877.97	1273.65	2.2088	1.6567	2.1799	6.041	4.932
180000	175042	1156.12	882.97	1280.65	2.1536 - 6	1.6153 - 6	2.1254 - 9	5.858 -10	4.782 -10
181000	175988	1161.12	887.97	1287.65	2.1001	1.5752	2.0726	5.682	4.638
182000	176933	1166.10	892.95	1294.65	2.0482	1.5363	2.0214	5.511	4.499
183000	177878	1171.07	897.92	1301.65	1.9979	1.4986	1.9718	5.347	4.365
184000	178823	1176.03	902.88	1308.65	1.9491	1.4620	1.9236	5.189	4.236
185000	179767	1180.97	907.82	1315.65	1.9018	1.4265	1.8769	5.036	4.111
186000	180711	1185.90	912.75	1322.65	1.8559	1.3920	1.8316	4.888	3.990
187000	181655	1190.82	917.67	1329.65	1.8113	1.3586	1.7876	4.746	3.874
188000	182598	1195.73	922.58	1336.65	1.7680	1.3261	1.7449	4.608	3.762
189000	183542	1200.62	927.47	1343.65	1.7260	1.2946	1.7034	4.475	3.653
190000	184485	1205.50	932.35	1350.65	1.6852 - 6	1.2640 - 6	1.6632 - 9	4.347 -10	3.548 -10
191000	185427	1208.59	935.44	1355.65	1.6456	1.2343	1.6241	4.229	3.452
192000	186370	1211.66	938.51	1360.65	1.6070	1.2054	1.5860	4.115	3.359
193000	187312	1214.73	941.58	1365.65	1.5695	1.1773	1.5490	4.004	3.268
194000	188253	1217.79	944.64	1370.65	1.5331	1.1499	1.5130	3.896	3.181
195000	189195	1220.84	947.69	1375.65	1.4976	1.1233	1.4780	3.792	3.096
196000	190136	1223.88	950.73	1380.65	1.4630	1.0974	1.4439	3.692	3.014
197000	191077	1226.91	953.76	1385.65	1.4294	1.0722	1.4107	3.594	2.934
198000	192018	1229.93	956.78	1390.65	1.3967	1.0476	1.3785	3.499	2.856
199000	192958	1232.95	959.80	1395.65	1.3649	1.0237	1.3470	3.407	2.781
200000	193898	1235.95	962.80	1400.65	1.3339 - 6	1.0005 - 6	1.3164 - 9	3.318 -10	2.708 -10
201000	194838	1238.95	965.80	1405.65	1.3037	9.7786 - 7	1.2867	3.231	2.638
202000	195777	1241.94	968.79	1410.65	1.2743	9.5583	1.2577	3.147	2.569
203000	196716	1244.91	971.76	1415.65	1.2457	9.3437	1.2294	3.066	2.502
204000	197655	1247.88	974.73	1420.65	1.2179	9.1347	1.2019	2.986	2.438
205000	198594	1250.84	977.69	1425.65	1.1907	8.9312	1.1752	2.910	2.375
206000	199532	1253.79	980.64	1430.65	1.1643	8.7330	1.1491	2.835	2.314
207000	200470	1256.73	983.58	1435.65	1.1386	8.5398	1.1237	2.763	2.255
208000	201408	1259.66	986.51	1440.65	1.1135	8.3517	1.0989	2.693	2.198
209000	202346	1262.58	989.43	1445.65	1.0890	8.1684	1.0748	2.624	2.142
210000	203283	1265.49	992.34	1450.65	1.0652 - 6	7.9898 - 7	1.0513 - 9	2.558 -10	2.088 -10
211000	204220	1268.40	995.25	1455.65	1.0420	7.8157	1.0284	2.494	2.036
212000	205156	1271.29	998.14	1460.65	1.0194	7.6461	1.0061	2.431	1.985
213000	206093	1274.17	1001.02	1465.65	9.9735 - 7	7.4807	9.8431 -10	2.371	1.935
214000	207029	1277.05	1003.90	1470.65	9.7586	7.3196	9.6310	2.312	1.887
215000	207964	1279.91	1006.76	1475.65	9.5491	7.1624	9.4242	2.254	1.840
216000	208900	1282.76	1009.61	1480.65	9.3449	7.0092	9.2227	2.199	1.795
217000	209835	1285.61	1012.46	1485.65	9.1457	6.8599	9.0261	2.145	1.751
218000	210770	1288.45	1015.30	1490.65	8.9515	6.7142	8.8345	2.092	1.708
219000	211705	1291.27	1018.12	1495.65	8.7621	6.5721	8.6476	2.041	1.666
220000	212639	1294.09	1020.94	1500.65	8.5774 - 7	6.4336 - 7	8.4653 -10	1.991 -10	1.625 -10
221000	213573	1296.89	1023.74	1505.65	8.3973	6.2985	8.2874	1.943	1.586
222000	214507	1299.69	1026.54	1510.65	8.2215	6.1666	8.1140	1.896	1.548
223000	215440	1302.47	1029.32	1515.65	8.0500	6.0380	7.9448	1.850	1.510
224000	216374	1305.25	1032.10	1520.65	7.8827	5.9125	7.7797	1.806	1.474
225000	217306	1308.02	1034.87	1525.65	7.7195	5.7901	7.6186	1.763	1.439
226000	218239	1310.77	1037.62	1530.65	7.5602	5.6706	7.4614	1.721	1.405
227000	219171	1313.52	1040.37	1535.65	7.4048	5.5540	7.3080	1.680	1.371
228000	220104	1316.26	1043.11	1540.65	7.2531	5.4402	7.1582	1.640	1.339
229000	221035	1318.99	1045.84	1545.65	7.1050	5.3292	7.0121	1.601	1.307
230000	221967	1321.70	1048.55	1550.65	6.9604 - 7	5.2207 - 7	6.8694 -10	1.564 -10	1.277 -10
231000	222898	1324.56	1051.41	1555.65	6.8193	5.1149	6.7301	1.528	1.247
232000	223829	1327.41	1054.26	1560.65	6.6813	5.0114	6.5940	1.493	1.219
233000	224760	1327.25	1054.10	1562.65	6.5466	4.9104	6.4610	1.459	1.191
234000	225690	1329.08	1055.93	1566.65	6.4150	4.8116	6.3311	1.426	1.164
235000	226620	1330.90	1057.75	1570.65	6.2863	4.7151	6.2041	1.394	1.138
236000	227550	1332.72	1059.57	1574.65	6.1606	4.6208	6.0801	1.363	1.113
237000	228479	1334.52	1061.37	1578.65	6.0378	4.5287	5.9588	1.332	1.088
238000	229409	1336.32	1063.17	1582.65	5.9177	4.4387	5.8403	1.303	1.063
239000	230338	1338.11	1064.96	1586.65	5.8004	4.3507	5.7245	1.274	1.040

TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
240000	231266	1339.90	1066.75	1590.65	5.6857 - 7	4.2646 - 7	5.6114 -10	1.245 -10	1.017 -10
241000	232195	1341.67	1068.52	1594.65	5.5736	4.1805	5.5007	1.218	9.940 -11
242000	233123	1343.44	1070.29	1598.65	5.4640	4.0983	5.3926	1.191	9.720
243000	234051	1345.20	1072.05	1602.65	5.3569	4.0180	5.2868	1.164	9.505
244000	234978	1346.95	1073.80	1606.65	5.2521	3.9394	5.1834	1.139	9.296
245000	235905	1348.69	1075.54	1610.65	5.1497	3.8626	5.0824	1.114	9.092
246000	236832	1350.42	1077.27	1614.65	5.0496	3.7875	4.9835	1.089	8.894
247000	237759	1352.15	1079.00	1618.65	4.9516	3.7140	4.8869	1.066	8.700
248000	238686	1353.87	1080.72	1622.65	4.8559	3.6422	4.7924	1.043	8.510
249000	239612	1355.58	1082.43	1626.65	4.7622	3.5720	4.6999	1.020	8.326
250000	240538	1357.28	1084.13	1630.65	4.6706 - 7	3.5032 - 7	4.6095 -10	9.978 -11	8.145 -11
251000	241463	1358.97	1085.82	1634.65	4.5810	3.4361	4.5211	9.763	7.970
252000	242389	1360.66	1087.51	1638.65	4.4934	3.3703	4.4346	9.553	7.798
253000	243314	1362.33	1089.18	1642.65	4.4077	3.3060	4.3500	9.348	7.631
254000	244238	1364.00	1090.85	1646.65	4.3238	3.2431	4.2673	9.148	7.467
255000	245163	1365.66	1092.51	1650.65	4.2418	3.1816	4.1863	8.952	7.308
256000	246087	1367.31	1094.16	1654.65	4.1615	3.1214	4.1071	8.762	7.152
257000	247011	1368.96	1095.81	1658.65	4.0830	3.0625	4.0296	8.575	7.000
258000	247934	1370.59	1097.44	1662.65	4.0061	3.0048	3.9537	8.394	6.852
259000	248858	1372.22	1099.07	1666.65	3.9309	2.9484	3.8795	8.217	6.707
260000	249781	1373.84	1100.69	1670.65	3.8573 - 7	2.8932 - 7	3.8069 -10	8.043 -11	6.566 -11
261000	250704	1375.45	1102.30	1674.65	3.7853	2.8392	3.7358	7.874	6.428
262000	251626	1377.06	1103.91	1678.65	3.7148	2.7863	3.6662	7.709	6.293
263000	252548	1378.65	1105.50	1682.65	3.6458	2.7346	3.5981	7.548	6.162
264000	253470	1380.24	1107.09	1686.65	3.5783	2.6839	3.5315	7.391	6.033
265000	254392	1381.82	1108.67	1690.65	3.5122	2.6344	3.4663	7.237	5.908
266000	255313	1383.39	1110.24	1694.65	3.4475	2.5858	3.4024	7.087	5.785
267000	256235	1384.95	1111.80	1698.65	3.3841	2.5383	3.3399	6.940	5.666
268000	257155	1386.50	1113.35	1702.65	3.3221	2.4918	3.2787	6.797	5.549
269000	258076	1388.05	1114.90	1706.65	3.2614	2.4462	3.2187	6.657	5.434
270000	258996	1389.59	1116.44	1710.65	3.2019 - 7	2.4016 - 7	3.1600 -10	6.521 -11	5.323 -11
271000	259916	1391.12	1117.97	1714.65	3.1437	2.3580	3.1026	6.387	5.214
272000	260836	1392.64	1119.49	1718.65	3.0867	2.3152	3.0463	6.257	5.107
273000	261755	1394.16	1121.01	1722.65	3.0308	2.2733	2.9912	6.129	5.003
274000	262675	1395.66	1122.51	1726.65	2.9761	2.2323	2.9372	6.005	4.902
275000	263594	1397.16	1124.01	1730.65	2.9226	2.1921	2.8844	5.883	4.802
276000	264512	1398.65	1125.50	1734.65	2.8701	2.1528	2.8326	5.764	4.705
277000	265430	1400.14	1126.99	1738.65	2.8187	2.1142	2.7819	5.648	4.610
278000	266349	1401.61	1128.46	1742.65	2.7684	2.0765	2.7322	5.534	4.518
279000	267266	1403.08	1129.93	1746.65	2.7191	2.0395	2.6835	5.423	4.427
280000	268184	1404.54	1131.39	1750.65	2.6708 - 7	2.0033 - 7	2.6359 -10	5.315 -11	4.339 -11
281000	269101	1405.99	1132.84	1754.65	2.6235	1.9678	2.5892	5.209	4.252
282000	270018	1407.43	1134.28	1758.65	2.5771	1.9330	2.5434	5.105	4.167
283000	270935	1408.87	1135.72	1762.65	2.5317	1.8989	2.4986	5.004	4.085
284000	271851	1410.29	1137.14	1766.65	2.4871	1.8655	2.4546	4.904	4.004
285000	272767	1411.71	1138.56	1770.65	2.4435	1.8328	2.4116	4.808	3.925
286000	273683	1413.13	1139.98	1774.65	2.4008	1.8007	2.3694	4.713	3.847
287000	274599	1414.53	1141.38	1778.65	2.3589	1.7693	2.3280	4.620	3.772
288000	275514	1415.93	1142.78	1782.65	2.3178	1.7385	2.2875	4.529	3.698
289000	276429	1417.32	1144.17	1786.65	2.2776	1.7083	2.2478	4.441	3.625
290000	277344	1418.70	1145.55	1790.65	2.2381 - 7	1.6787 - 7	2.2088 -10	4.354 -11	3.554 -11
291000	278258	1420.07	1146.92	1794.65	2.1994	1.6497	2.1707	4.269	3.485
292000	279172	1421.44	1148.29	1798.65	2.1615	1.6213	2.1333	4.187	3.418
293000	280086	1422.80	1149.65	1802.65	2.1244	1.5934	2.0966	4.105	3.351
294000	281000	1424.15	1151.00	1806.65	2.0880	1.5661	2.0607	4.026	3.287
295000	281913	1425.50	1152.35	1810.65	2.0522	1.5393	2.0254	3.949	3.223
296000	282826	1426.84	1153.69	1814.65	2.0172	1.5130	1.9908	3.873	3.161
297000	283739	1428.17	1155.02	1818.65	1.9829	1.4873	1.9570	3.798	3.101
298000	284652	1429.49	1156.34	1822.65	1.9492	1.4620	1.9237	3.726	3.041
299000	285564	1430.80	1157.65	1826.65	1.9162	1.4373	1.8912	3.654	2.983
300000	286476	1432.11	1158.96	1830.65	1.8838 - 7	1.4130 - 7	1.8592 -10	3.585 -11	2.926 -11
301000	287389	1433.41	1160.26	1834.65	1.8520	1.3888	1.8371	3.513	2.861
302000	288299	1434.69	1161.54	1838.65	1.8209	1.3658	1.8151	3.443	2.797
303000	289208	1435.96	1162.81	1842.65	1.7904	1.3434	1.7934	3.374	2.735
304000	290114	1437.22	1164.07	1846.65	1.7604	1.3214	1.7714	3.306	2.674
305000	291019	1438.47	1165.32	1850.65	1.7309	1.3000	1.7500	3.240	2.614
306000	291922	1439.71	1166.56	1854.65	1.7021	1.2791	1.7291	3.174	2.555
307000	292824	1440.94	1167.79	1858.65	1.6738	1.2587	1.7087	3.109	2.497
308000	293724	1442.16	1169.01	1862.65	1.6459	1.2388	1.6888	3.044	2.440
309000	294622	1443.37	1170.22	1866.65	1.6184	1.2194	1.6694	2.980	2.384
310000	295518	1444.57	1171.42	1870.65	1.5913	1.1994	1.6504	2.917	2.329
311000	296412	1445.76	1172.61	1874.65	1.5646	1.1799	1.6319	2.855	2.275
312000	297304	1446.94	1173.79	1878.65	1.5383	1.1609	1.6139	2.794	2.222
313000	298194	1448.11	1174.96	1882.65	1.5124	1.1424	1.5964	2.734	2.170
314000	299081	1449.27	1176.11	1886.65	1.4869	1.1244	1.5794	2.675	2.119
315000	300000	1450.41	1177.25	1890.65	1.4618	1.1069	1.5629	2.617	2.069
316000	300919	1451.54	1178.38	1894.65	1.4371	1.0899	1.5469	2.560	2.020
317000	301836	1452.66	1179.50	1898.65	1.4128	1.0734	1.5314	2.504	1.972
318000	302750	1453.77	1180.61	1902.65	1.3889	1.0574	1.5164	2.449	1.925
319000	303661	1454.87	1181.71	1906.65	1.3654	1.0419	1.5019	2.395	1.879
320000	304569	1455.96	1182.80	1910.65	1.3424	1.0269	1.4879	2.342	1.834
321000	305474	1457.04	1183.88	1914.65	1.3198	1.0124	1.4744	2.290	1.789
322000	306376	1458.11	1184.95	1918.65	1.2976	1.0000	1.4624	2.239	1.745
323000	307275	1459.17	1186.01	1922.65	1.2758	0.9880	1.4509	2.189	1.702
324000	308171	1460.22	1187.06	1926.65	1.2544	0.9764	1.4399	2.140	1.660
325000	309064	1461.26	1188.10	1930.65	1.2334	0.9652	1.4294	2.092	1.618
326000	310000	1462.29	1189.13	1934.65	1.2128	0.9544	1.4194	2.045	1.577
327000	310919	1463.31	1190.15	1938.65	1.1926	0.9440	1.4099	2.000	1.537
328000	311836	1464.32	1191.16	1942.65	1.1728	0.9340	1.4009	1.956	1.497
329000	312750	1465.32	1192.16	1946.65	1.1534	0.9244	1.3924	1.913	1.458
330000	313661	1466.31	1193.15	1950.65	1.1344	0.9152	1.3844	1.871	1.420
331000	314569	1467.29	1194.13	1954.65	1.1158	0.9064	1.3769	1.830	1.383
332000	315474	1468.26	1195.10	1958.65	1.0976	0.8980	1.3699	1.790	1.347
333000	316376	1469.22	1196.06	1962.65	1.0798	0.8900	1.3634	1.751	1.312
334000	317275	1470.17	1197.01	1966.65	1.0624	0.8824	1.3574	1.713	1.278
335000	318171	1471.11	1197.95	1970.65	1.0454	0.8752	1.3519	1.676	1.245
336000	319064	1472.04	1198.88	1974.65	1.0288	0.8684	1.3469	1.640	1.213
337000	319961	1472.96	1199.80	1978.65	1.0126	0.8620	1.3424	1.605	1.182
338000	320861	1473.87	1200.71	1982.65	1.0000	0.8560	1.3384	1.571	1.152



TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
340000	322733	1458.23	1185.08	1962.65	9.8014 - 8	7.3516 - 8	9.6732 -11	1.740 -11	1.420 -11
342000	324534	1459.34	1186.19	1969.25	9.4993	7.1251	9.3751	1.680	1.372
344000	326335	1460.45	1187.30	1975.85	9.2077	6.9063	9.0873	1.623	1.325
346000	328134	1461.53	1188.38	1982.45	8.9261	6.6951	8.8094	1.569	1.280
348000	329932	1462.61	1189.46	1989.05	8.6542	6.4912	8.5410	1.516	1.237
350000	331729	1463.67	1190.52	1995.65	8.3915	6.2942	8.2818	1.465	1.196
352000	333525	1464.72	1191.57	2002.25	8.1379	6.1039	8.0315	1.416	1.156
354000	335320	1465.75	1192.60	2008.85	7.8928	5.9201	7.7896	1.369	1.117
356000	337114	1466.78	1193.63	2015.45	7.6560	5.7425	7.5559	1.323	1.080
358000	338907	1467.79	1194.64	2022.05	7.4272	5.5709	7.3301	1.280	1.045
360000	340699	1468.79	1195.64	2028.65	7.2061 - 8	5.4050 - 8	7.1119 -11	1.237 -11	1.010 -11
362000	342490	1469.78	1196.63	2035.25	6.9924	5.2447	6.9009	1.197	9.770 -12
364000	344279	1470.76	1197.61	2041.85	6.7858	5.0897	6.6970	1.158	9.451
366000	346068	1471.74	1198.59	2048.45	6.5860	4.9399	6.4999	1.120	9.143
368000	347856	1472.70	1199.55	2055.05	6.3929	4.7951	6.3093	1.084	8.847
370000	349642	1473.66	1200.51	2061.65	6.2061	4.6550	6.1250	1.049	8.561
372000	351427	1474.61	1201.46	2068.25	6.0255	4.5195	5.9467	1.015	8.285
374000	353212	1475.55	1202.40	2074.85	5.8508	4.3884	5.7742	9.823 -12	8.019
376000	354995	1476.48	1203.33	2081.45	5.6817	4.2616	5.6074	9.509	7.763
378000	356777	1477.41	1204.26	2088.05	5.5182	4.1390	5.4460	9.206	7.515
380000	358559	1478.33	1205.18	2094.65	5.3599 - 8	4.0203 - 8	5.2898 -11	8.914 -12	7.277 -12
382000	360339	1479.25	1206.10	2101.25	5.2068	3.9054	5.1387	8.632	7.047
384000	362118	1480.16	1207.01	2107.85	5.0586	3.7942	4.9924	8.360	6.825
386000	363896	1481.07	1207.92	2114.45	4.9151	3.6866	4.8508	8.098	6.611
388000	365673	1481.98	1208.83	2121.05	4.7762	3.5825	4.7138	7.845	6.404
390000	367449	1482.88	1209.73	2127.65	4.6417	3.4816	4.5810	7.600	6.204
392000	369223	1483.78	1210.63	2134.25	4.5115	3.3839	4.4525	7.364	6.011
394000	370997	1484.68	1211.53	2140.85	4.3854	3.2893	4.3281	7.136	5.825
396000	372770	1485.58	1212.43	2147.45	4.2633	3.1977	4.2075	6.916	5.646
398000	374542	1486.48	1213.33	2154.05	4.1450	3.1090	4.0908	6.704	5.472
400000	376312	1487.38	1214.23	2160.65	4.0304 - 8	3.0230 - 8	3.9777 -11	6.498 -12	5.305 -12
402000	378082	1487.31	1214.16	2165.85	3.9193	2.9397	3.8680	6.304	5.146
404000	379850	1487.26	1214.11	2171.05	3.8116	2.8589	3.7618	6.116	4.993
406000	381618	1487.20	1214.05	2176.25	3.7072	2.7806	3.6587	5.934	4.844
408000	383384	1487.16	1214.01	2181.45	3.6059	2.7047	3.5588	5.758	4.701
410000	385150	1487.12	1213.97	2186.65	3.5077	2.6310	3.4618	5.588	4.562
412000	386914	1487.09	1213.94	2191.85	3.4124	2.5595	3.3678	5.424	4.427
414000	388677	1487.07	1213.92	2197.05	3.3200	2.4902	3.2766	5.264	4.297
416000	390440	1487.05	1213.90	2202.25	3.2304	2.4230	3.1881	5.110	4.171
418000	392201	1487.05	1213.90	2207.45	3.1434	2.3578	3.1023	4.961	4.050
420000	393961	1487.05	1213.90	2212.65	3.0591 - 8	2.2945 - 8	3.0190 -11	4.816 -12	3.932 -12
422000	395720	1487.06	1213.91	2217.85	2.9772	2.2331	2.9382	4.676	3.817
424000	397478	1487.09	1213.94	2223.05	2.8977	2.1735	2.8598	4.541	3.707
426000	399235	1487.12	1213.97	2228.25	2.8206	2.1156	2.7837	4.410	3.600
428000	400991	1487.17	1214.02	2233.45	2.7458	2.0595	2.7099	4.283	3.496
430000	402746	1487.22	1214.07	2238.65	2.6731	2.0050	2.6382	4.160	3.396
432000	404500	1487.29	1214.14	2243.85	2.6026	1.9521	2.5686	4.041	3.299
434000	406253	1487.37	1214.22	2249.05	2.5341	1.9008	2.5010	3.925	3.204
436000	408005	1487.47	1214.32	2254.25	2.4677	1.8509	2.4354	3.813	3.113
438000	409756	1487.58	1214.43	2259.45	2.4031	1.8025	2.3717	3.705	3.025
440000	411506	1487.70	1214.55	2264.65	2.3405 - 8	1.7555 - 8	2.3098 -11	3.600 -12	2.939 -12
442000	413255	1487.83	1214.68	2269.85	2.2796	1.7098	2.2498	3.499	2.856
444000	415002	1487.98	1214.83	2275.05	2.2205	1.6655	2.1914	3.400	2.776
446000	416749	1488.14	1214.99	2280.25	2.1630	1.6224	2.1348	3.305	2.698
448000	418495	1488.32	1215.17	2285.45	2.1073	1.5806	2.0797	3.212	2.622
450000	420240	1488.52	1215.37	2290.65	2.0531	1.5399	2.0262	3.122	2.549
452000	421983	1488.73	1215.58	2295.85	2.0004	1.5005	1.9743	3.035	2.478
454000	423726	1488.95	1215.80	2301.05	1.9493	1.4621	1.9238	2.951	2.409
456000	425467	1489.19	1216.04	2306.25	1.8996	1.4248	1.8747	2.869	2.342
458000	427208	1489.45	1216.30	2311.45	1.8513	1.3886	1.8271	2.790	2.278
460000	428948	1489.73	1216.58	2316.65	1.8043 - 8	1.3534 - 8	1.7808 -11	2.713 -12	2.215 -12
462000	430686	1490.02	1216.87	2321.85	1.7587	1.3192	1.7357	2.639	2.154
464000	432424	1490.33	1217.18	2327.05	1.7144	1.2859	1.6920	2.566	2.095
466000	434160	1490.66	1217.51	2332.25	1.6713	1.2536	1.6494	2.496	2.038
468000	435896	1491.01	1217.86	2337.45	1.6294	1.2221	1.6081	2.428	1.982
470000	437630	1491.38	1218.23	2342.65	1.5886	1.1916	1.5679	2.362	1.928
472000	439364	1491.76	1218.61	2347.85	1.5490	1.1619	1.5288	2.298	1.876
474000	441096	1492.16	1219.01	2353.05	1.5105	1.1330	1.4907	2.236	1.826
476000	442828	1492.58	1219.43	2358.25	1.4730	1.1049	1.4538	2.176	1.776
478000	444558	1493.03	1219.88	2363.45	1.4366	1.0775	1.4178	2.118	1.729
480000	446287	1493.49	1220.34	2368.65	1.4012 - 8	1.0510 - 8	1.3829 -11	2.061 -12	1.682 -12
482000	448016	1493.97	1220.82	2373.85	1.3667	1.0251	1.3489	2.006	1.637
484000	449743	1494.47	1221.32	2379.05	1.3332	9.9999 - 9	1.3158	1.952	1.594
486000	451469	1494.99	1221.84	2384.25	1.3006	9.7553	1.2836	1.900	1.551
488000	453195	1495.53	1222.38	2389.45	1.2689	9.5173	1.2523	1.850	1.510
490000	454919	1496.10	1222.95	2394.65	1.2380	9.2858	1.2218	1.801	1.470
492000	456642	1496.68	1223.53	2399.85	1.2080	9.0605	1.1922	1.754	1.431
494000	458365	1497.28	1224.13	2405.05	1.1787	8.8413	1.1633	1.707	1.394
496000	460086	1497.91	1224.76	2410.25	1.1503	8.6280	1.1353	1.663	1.357
498000	461806	1498.56	1225.41	2415.45	1.1226	8.4203	1.1079	1.619	1.322

TABLE I.—Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
500000	463526	1499.22	1226.07	2420.65	1.0957 - 8	8.2183 - 9	1.0814 -11	1.577 -12	1.287 -12
502000	465244	1498.80	1225.65	2424.05	1.0694	8.0215	1.0555	1.537	1.255
504000	466961	1498.40	1225.25	2427.45	1.0439	7.8298	1.0302	1.498	1.223
506000	468678	1498.02	1224.87	2430.85	1.0190	7.6431	1.0057	1.460	1.192
508000	470393	1497.68	1224.53	2434.25	9.9474 - 9	7.4612	9.8173 -12	1.424	1.162
510000	472107	1497.35	1224.20	2437.65	9.7111	7.2839	9.5841	1.388	1.133
512000	473821	1497.05	1223.90	2441.05	9.4809	7.1112	9.3569	1.353	1.105
514000	475533	1496.78	1223.63	2444.45	9.2565	6.9430	9.1355	1.319	1.077
516000	477244	1496.53	1223.38	2447.85	9.0379	6.7790	8.9197	1.286	1.050
518000	478954	1496.30	1223.15	2451.25	8.8249	6.6192	8.7095	1.254	1.024
520000	480664	1496.10	1222.95	2454.65	8.6173 - 9	6.4635 - 9	8.5046 -12	1.223 -12	9.983 -13
522000	482372	1495.93	1222.78	2458.05	8.4149	6.3117	8.3049	1.193	9.736
524000	484079	1495.78	1222.63	2461.45	8.2177	6.1638	8.1103	1.163	9.494
526000	485786	1495.65	1222.50	2464.85	8.0255	6.0197	7.9206	1.134	9.259
528000	487491	1495.55	1222.40	2468.25	7.8382	5.8791	7.7357	1.106	9.031
530000	489195	1495.47	1222.32	2471.65	7.6556	5.7422	7.5555	1.079	8.808
532000	490899	1495.42	1222.27	2475.05	7.4776	5.6086	7.3798	1.052	8.592
534000	492601	1495.39	1222.24	2478.45	7.3040	5.4785	7.2085	1.027	8.381
536000	494303	1495.38	1222.23	2481.85	7.1349	5.3516	7.0416	1.001	8.175
538000	496003	1495.40	1222.25	2485.25	6.9699	5.2279	6.8788	9.770 -13	7.976
540000	497702	1495.44	1222.29	2488.65	6.8091 - 9	5.1072 - 9	6.7200 -12	9.532 -13	7.781 -13
542000	499401	1495.51	1222.36	2492.05	6.6523	4.9896	6.5653	9.299	7.591
544000	501098	1495.59	1222.44	2495.45	6.4994	4.8749	6.4144	9.073	7.407
546000	502795	1495.70	1222.55	2498.85	6.3502	4.7631	6.2672	8.853	7.227
548000	504490	1495.84	1222.69	2502.25	6.2048	4.6540	6.1237	8.638	7.052
550000	506185	1495.99	1222.84	2505.65	6.0630	4.5477	5.9838	8.430	6.881
552000	507878	1496.17	1223.02	2509.05	5.9247	4.4439	5.8473	8.226	6.715
554000	509571	1496.36	1223.21	2512.45	5.7898	4.3427	5.7141	8.028	6.553
556000	511262	1496.58	1223.43	2515.85	5.6583	4.2441	5.5843	7.835	6.396
558000	512953	1496.82	1223.67	2519.25	5.5300	4.1478	5.4576	7.647	6.242
560000	514642	1497.09	1223.94	2522.65	5.4048 - 9	4.0539 - 9	5.3341 -12	7.464 -13	6.093 -13
562000	516331	1497.37	1224.22	2526.05	5.2827	3.9623	5.2136	7.285	5.947
564000	518018	1497.67	1224.52	2529.45	5.1635	3.8730	5.0960	7.111	5.805
566000	519705	1497.99	1224.84	2532.85	5.0473	3.7858	4.9813	6.942	5.667
568000	521391	1498.33	1225.18	2536.25	4.9339	3.7008	4.8694	6.777	5.532
570000	523075	1498.69	1225.54	2539.65	4.8233	3.6178	4.7602	6.616	5.401
572000	524759	1499.07	1225.92	2543.05	4.7154	3.5368	4.6537	6.459	5.273
574000	526442	1499.47	1226.32	2546.45	4.6100	3.4578	4.5497	6.307	5.148
576000	528124	1499.88	1226.73	2549.85	4.5072	3.3807	4.4483	6.158	5.027
578000	529805	1500.32	1227.17	2553.25	4.4069	3.3055	4.3493	6.013	4.908
580000	531484	1500.77	1227.62	2556.65	4.3091 - 9	3.2321 - 9	4.2527 -12	5.872 -13	4.793 -13
582000	533163	1501.24	1228.09	2560.05	4.2135	3.1604	4.1584	5.734	4.681
584000	534841	1501.72	1228.57	2563.45	4.1203	3.0905	4.0664	5.599	4.571
586000	536518	1502.22	1229.07	2566.85	4.0293	3.0222	3.9766	5.468	4.464
588000	538194	1502.73	1229.58	2570.25	3.9405	2.9556	3.8889	5.341	4.360
590000	539869	1503.27	1230.12	2573.65	3.8538	2.8906	3.8034	5.216	4.258
592000	541543	1503.81	1230.66	2577.05	3.7691	2.8271	3.7198	5.095	4.159
594000	543216	1504.37	1231.22	2580.45	3.6865	2.7651	3.6383	4.977	4.063
596000	544888	1504.94	1231.79	2583.85	3.6058	2.7046	3.5587	4.862	3.969
598000	546559	1505.53	1232.38	2587.25	3.5271	2.6455	3.4810	4.749	3.877
600000	548230	1506.13	1232.98	2590.65	3.4502 - 9	2.5879 - 9	3.4051 -12	4.640 -13	3.787 -13
602000	549899	1506.04	1232.89	2592.85	3.3751	2.5316	3.3310	4.535	3.702
604000	551567	1505.97	1232.82	2595.05	3.3018	2.4765	3.2586	4.432	3.618
606000	553234	1505.91	1232.76	2597.25	3.2301	2.4228	3.1879	4.333	3.537
608000	554901	1505.87	1232.72	2599.45	3.1601	2.3703	3.1188	4.235	3.457
610000	556566	1505.83	1232.68	2601.65	3.0917	2.3190	3.0513	4.140	3.380
612000	558230	1505.81	1232.66	2603.85	3.0249	2.2689	2.9854	4.047	3.304
614000	559894	1505.79	1232.64	2606.05	2.9597	2.2199	2.9210	3.956	3.230
616000	561556	1505.79	1232.64	2608.25	2.8959	2.1721	2.8580	3.868	3.157
618000	563218	1505.80	1232.65	2610.45	2.8336	2.1253	2.7965	3.781	3.087
620000	564879	1505.81	1232.66	2612.65	2.7727 - 9	2.0797 - 9	2.7364 -12	3.697 -13	3.018 -13
622000	566538	1505.83	1232.68	2614.85	2.7132	2.0350	2.6777	3.615	2.951
624000	568197	1505.86	1232.71	2617.05	2.6550	1.9914	2.6203	3.534	2.885
626000	569855	1505.90	1232.75	2619.25	2.5982	1.9488	2.5642	3.456	2.821
628000	571511	1505.95	1232.80	2621.45	2.5427	1.9072	2.5094	3.379	2.758
630000	573167	1506.00	1232.85	2623.65	2.4884	1.8665	2.4559	3.304	2.697
632000	574822	1506.06	1232.91	2625.85	2.4354	1.8267	2.4036	3.231	2.638
634000	576476	1506.12	1232.97	2628.05	2.3836	1.7878	2.3524	3.160	2.579
636000	578129	1506.18	1233.03	2630.25	2.3329	1.7498	2.3024	3.090	2.522
638000	579781	1506.25	1233.10	2632.45	2.2834	1.7127	2.2536	3.022	2.467
640000	581432	1506.33	1233.18	2634.65	2.2350 - 9	1.6764 - 9	2.2058 -12	2.955 -13	2.412 -13
642000	583082	1506.41	1233.26	2636.85	2.1877	1.6409	2.1591	2.890	2.359
644000	584732	1506.49	1233.34	2639.05	2.1415	1.6063	2.1135	2.827	2.308
646000	586380	1506.57	1233.42	2641.25	2.0963	1.5724	2.0689	2.765	2.257
648000	588027	1506.65	1233.50	2643.45	2.0521	1.5392	2.0253	2.704	2.208
650000	589674	1506.73	1233.58	2645.65	2.0090	1.5068	1.9827	2.645	2.159
652000	591319	1506.82	1233.67	2647.85	1.9667	1.4752	1.9410	2.588	2.112
654000	592964	1506.90	1233.75	2650.05	1.9255	1.4442	1.9003	2.531	2.066
656000	594607	1506.98	1233.83	2652.25	1.8851	1.4139	1.8605	2.476	2.021
658000	596250	1507.06	1233.91	2654.45	1.8457	1.3844	1.8215	2.422	1.977

TABLE I.—Concluded  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Temperature			Pressure			Density	
Z, m	H, m	T, °K	t, °C	T <sub>M</sub> , °K	P, mb	P, mm Hg	$\frac{P}{P_0}$	$\rho$ , kg m <sup>-3</sup>	$\frac{\rho}{\rho_0}$
660000	597892	1507.14	1233.99	2656.65	1.8071 - 9	1.3554 - 9	1.7835 -12	2.370 -13	1.936 -13
662000	599532	1507.22	1234.07	2658.85	1.7694	1.3271	1.7462	2.318	1.892
664000	601172	1507.30	1234.15	2661.05	1.7325	1.2995	1.7098	2.268	1.851
666000	602811	1507.37	1234.22	2663.25	1.6964	1.2724	1.6743	2.219	1.811
668000	604449	1507.43	1234.28	2665.45	1.6612	1.2460	1.6395	2.171	1.772
670000	606086	1507.50	1234.35	2667.65	1.6267	1.2201	1.6054	2.124	1.734
672000	607722	1507.55	1234.40	2669.85	1.5930	1.1948	1.5722	2.079	1.697
674000	609357	1507.61	1234.46	2672.05	1.5600	1.1701	1.5396	2.034	1.660
676000	610991	1507.65	1234.50	2674.25	1.5278	1.1459	1.5078	1.990	1.625
678000	612625	1507.69	1234.54	2676.45	1.4962	1.1223	1.4767	1.948	1.590
680000	614257	1507.73	1234.58	2678.65	1.4654 - 9	1.0991 - 9	1.4462 -12	1.906 -13	1.556 -13
682000	615889	1507.75	1234.60	2680.85	1.4352	1.0765	1.4165	1.865	1.522
684000	617519	1507.77	1234.62	2683.05	1.4057	1.0544	1.3874	1.825	1.490
686000	619149	1507.79	1234.64	2685.25	1.3769	1.0327	1.3589	1.786	1.458
688000	620777	1507.79	1234.64	2687.45	1.3487	1.0116	1.3310	1.748	1.427
690000	622405	1507.78	1234.63	2689.65	1.3210	9.9087 -10	1.3038	1.711	1.397
692000	624032	1507.77	1234.62	2691.85	1.2940	9.7061	1.2771	1.675	1.367
694000	625658	1507.75	1234.60	2694.05	1.2676	9.5079	1.2510	1.639	1.338
696000	627283	1507.71	1234.56	2696.25	1.2418	9.3141	1.2255	1.604	1.310
698000	628907	1507.67	1234.52	2698.45	1.2165	9.1245	1.2006	1.570	1.282
700000	630530	1507.61	1234.46	2700.65	1.1918 - 9	8.9390 -10	1.1762 -12	1.537 -13	1.255 -13



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Table II

ACCELERATION DUE TO GRAVITY, SPECIFIC WEIGHT, PRESSURE SCALE  
HEIGHT, NUMBER DENSITY, PARTICLE SPEED, COLLISION FREQUENCY,  
MEAN FREE PATH, AND MOLECULAR WEIGHT

Metric Units

NOTE: A one- or two-digit number (preceded by a plus or minus sign) following the initial entry of each block indicates the power of ten by which that entry and each succeeding entry of that block should be multiplied. A change of power occurring within a block is indicated by a similar notation.

TABLE II  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
$H, \text{m}$	$Z, \text{m}$								
-5000	-4996	9.8221	1.8961 + 1	9371.1	4.0140 +25	484.14	1.1503 +10	4.2089 - 8	28.964
-4950	-4946	9.8219	1.8879	9361.7	3.9967	483.89	1.1447	4.2271	28.964
-4900	-4896	9.8218	1.8798	9352.4	3.9795	483.64	1.1392	4.2454	28.964
-4850	-4846	9.8216	1.8716	9343.0	3.9623	483.40	1.1337	4.2638	28.964
-4800	-4796	9.8215	1.8635	9333.7	3.9452	483.15	1.1283	4.2823	28.964
-4750	-4746	9.8213	1.8554	9324.3	3.9282	482.91	1.1228	4.3009	28.964
-4700	-4697	9.8212	1.8474	9315.0	3.9112	482.66	1.1174	4.3196	28.964
-4650	-4647	9.8210	1.8393	9305.6	3.8942	482.41	1.1120	4.3384	28.964
-4600	-4597	9.8208	1.8313	9296.3	3.8773	482.17	1.1066	4.3573	28.964
-4550	-4547	9.8207	1.8233	9286.9	3.8605	481.92	1.1012	4.3763	28.964
-4500	-4497	9.8205	1.8154 + 1	9277.5	3.8437 +25	481.68	1.0959 +10	4.3954 - 8	28.964
-4450	-4447	9.8204	1.8075	9268.2	3.8270	481.43	1.0905	4.4146	28.964
-4400	-4397	9.8202	1.7996	9258.8	3.8103	481.18	1.0852	4.4339	28.964
-4350	-4347	9.8201	1.7917	9249.5	3.7937	480.93	1.0799	4.4533	28.964
-4300	-4297	9.8199	1.7838	9240.1	3.7772	480.69	1.0747	4.4729	28.964
-4250	-4247	9.8198	1.7760	9230.8	3.7607	480.44	1.0694	4.4925	28.964
-4200	-4197	9.8196	1.7682	9221.4	3.7442	480.19	1.0642	4.5122	28.964
-4150	-4147	9.8195	1.7605	9212.1	3.7278	479.95	1.0590	4.5320	28.964
-4100	-4097	9.8193	1.7527	9202.7	3.7115	479.70	1.0538	4.5520	28.964
-4050	-4047	9.8192	1.7450	9193.4	3.6952	479.45	1.0487	4.5720	28.964
-4000	-3997	9.8190	1.7373 + 1	9184.0	3.6790 +25	479.20	1.0435 +10	4.5922 - 8	28.964
-3950	-3948	9.8188	1.7296	9174.6	3.6628	478.95	1.0384	4.6125	28.964
-3900	-3898	9.8187	1.7220	9165.3	3.6467	478.71	1.0333	4.6329	28.964
-3850	-3848	9.8185	1.7144	9155.9	3.6306	478.46	1.0282	4.6534	28.964
-3800	-3798	9.8184	1.7068	9146.6	3.6146	478.21	1.0231	4.6740	28.964
-3750	-3748	9.8182	1.6993	9137.2	3.5987	477.96	1.0181	4.6947	28.964
-3700	-3698	9.8181	1.6917	9127.8	3.5828	477.71	1.0131	4.7155	28.964
-3650	-3648	9.8179	1.6842	9118.5	3.5669	477.46	1.0081	4.7365	28.964
-3600	-3598	9.8178	1.6767	9109.1	3.5511	477.22	1.0031	4.7575	28.964
-3550	-3548	9.8176	1.6693	9099.8	3.5354	476.97	9.9811 + 9	4.7787	28.964
-3500	-3498	9.8175	1.6618 + 1	9090.4	3.5197 +25	476.72	9.9316 + 9	4.8000 - 8	28.964
-3450	-3448	9.8173	1.6544	9081.1	3.5041	476.47	9.8823	4.8214	28.964
-3400	-3398	9.8171	1.6470	9071.7	3.4885	476.22	9.8332	4.8430	28.964
-3350	-3348	9.8170	1.6397	9062.3	3.4730	475.97	9.7843	4.8646	28.964
-3300	-3298	9.8168	1.6324	9053.0	3.4575	475.72	9.7356	4.8864	28.964
-3250	-3248	9.8167	1.6251	9043.6	3.4421	475.47	9.6871	4.9083	28.964
-3200	-3198	9.8165	1.6178	9034.2	3.4267	475.22	9.6388	4.9303	28.964
-3150	-3148	9.8164	1.6105	9024.9	3.4114	474.97	9.5907	4.9524	28.964
-3100	-3098	9.8162	1.6033	9015.5	3.3961	474.72	9.5427	4.9747	28.964
-3050	-3049	9.8161	1.5961	9006.2	3.3809	474.47	9.4950	4.9971	28.964
-3000	-2999	9.8159	1.5889 + 1	8996.8	3.3658 +25	474.22	9.4474 + 9	5.0196 - 8	28.964
-2950	-2949	9.8158	1.5817	8987.4	3.3507	473.97	9.4001	5.0422	28.964
-2900	-2899	9.8156	1.5746	8978.1	3.3356	473.72	9.3529	5.0649	28.964
-2850	-2849	9.8154	1.5675	8968.7	3.3206	473.47	9.3059	5.0878	28.964
-2800	-2799	9.8153	1.5604	8959.3	3.3056	473.22	9.2591	5.1108	28.964
-2750	-2749	9.8151	1.5534	8950.0	3.2908	472.97	9.2124	5.1340	28.964
-2700	-2699	9.8150	1.5463	8940.6	3.2759	472.71	9.1660	5.1573	28.964
-2650	-2649	9.8148	1.5393	8931.3	3.2611	472.46	9.1198	5.1807	28.964
-2600	-2599	9.8147	1.5323	8921.9	3.2464	472.21	9.0737	5.2042	28.964
-2550	-2549	9.8145	1.5254	8912.5	3.2317	471.96	9.0278	5.2278	28.964
-2500	-2499	9.8144	1.5184 + 1	8903.2	3.2170 +25	471.71	8.9821 + 9	5.2516 - 8	28.964
-2450	-2449	9.8142	1.5115	8893.8	3.2024	471.46	8.9366	5.2756	28.964
-2400	-2399	9.8141	1.5046	8884.4	3.1879	471.20	8.8912	5.2996	28.964
-2350	-2349	9.8139	1.4978	8875.1	3.1734	470.95	8.8461	5.3238	28.964
-2300	-2299	9.8137	1.4909	8865.7	3.1590	470.70	8.8011	5.3482	28.964
-2250	-2249	9.8136	1.4841	8856.3	3.1446	470.45	8.7563	5.3726	28.964
-2200	-2199	9.8134	1.4773	8847.0	3.1302	470.19	8.7117	5.3973	28.964
-2150	-2149	9.8133	1.4706	8837.6	3.1159	469.94	8.6673	5.4220	28.964
-2100	-2099	9.8131	1.4638	8828.2	3.1017	469.69	8.6230	5.4469	28.964
-2050	-2049	9.8130	1.4571	8818.9	3.0875	469.44	8.5790	5.4719	28.964
-2000	-1999	9.8128	1.4504 + 1	8809.5	3.0734 +25	469.18	8.5351 + 9	5.4971 - 8	28.964
-1950	-1949	9.8127	1.4437	8800.1	3.0593	468.93	8.4914	5.5224	28.964
-1900	-1899	9.8125	1.4371	8790.7	3.0452	468.68	8.4478	5.5479	28.964
-1850	-1849	9.8124	1.4305	8781.4	3.0312	468.42	8.4044	5.5735	28.964
-1800	-1799	9.8122	1.4239	8772.0	3.0173	468.17	8.3613	5.5993	28.964
-1750	-1750	9.8121	1.4173	8762.6	3.0034	467.92	8.3182	5.6252	28.964
-1700	-1700	9.8119	1.4107	8753.3	2.9896	467.66	8.2754	5.6512	28.964
-1650	-1650	9.8117	1.4042	8743.9	2.9758	467.41	8.2327	5.6774	28.964
-1600	-1600	9.8116	1.3977	8734.5	2.9620	467.15	8.1903	5.7038	28.964
-1550	-1550	9.8114	1.3912	8725.2	2.9483	466.90	8.1479	5.7303	28.964
-1500	-1500	9.8113	1.3847 + 1	8715.8	2.9347 +25	466.64	8.1058 + 9	5.7569 - 8	28.964
-1450	-1450	9.8111	1.3783	8706.4	2.9211	466.39	8.0638	5.7837	28.964
-1400	-1400	9.8110	1.3719	8697.0	2.9075	466.14	8.0220	5.8107	28.964
-1350	-1350	9.8108	1.3655	8687.7	2.8940	465.88	7.9804	5.8378	28.964
-1300	-1300	9.8107	1.3591	8678.3	2.8806	465.63	7.9389	5.8651	28.964
-1250	-1250	9.8105	1.3528	8668.9	2.8671	465.37	7.8977	5.8925	28.964
-1200	-1200	9.8104	1.3464	8659.6	2.8538	465.11	7.8565	5.9201	28.964
-1150	-1150	9.8102	1.3401	8650.2	2.8405	464.86	7.8156	5.9478	28.964
-1100	-1100	9.8100	1.3339	8640.8	2.8272	464.60	7.7748	5.9758	28.964
-1050	-1050	9.8099	1.3276	8631.4	2.8140	464.35	7.7342	6.0038	28.964



TABLE II

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
-5000	-5004	9.8221	1.8968 + 1	9371.8	4.0154 +25	484.15	1.1507 +10	4.2075 - 8	28.964
-4950	-4954	9.8219	1.8886	9362.4	3.9981	483.91	1.1452	4.2257	28.964
-4900	-4904	9.8218	1.8804	9353.1	3.9808	483.66	1.1396	4.2440	28.964
-4850	-4854	9.8216	1.8722	9343.7	3.9636	483.42	1.1341	4.2624	28.964
-4800	-4804	9.8215	1.8641	9334.3	3.9465	483.17	1.1286	4.2810	28.964
-4750	-4754	9.8213	1.8560	9325.0	3.9294	482.92	1.1232	4.2996	28.964
-4700	-4703	9.8212	1.8479	9315.6	3.9123	482.68	1.1177	4.3183	28.964
-4650	-4653	9.8210	1.8399	9306.2	3.8954	482.43	1.1123	4.3371	28.964
-4600	-4603	9.8209	1.8319	9296.9	3.8784	482.18	1.1069	4.3560	28.964
-4550	-4553	9.8207	1.8239	9287.5	3.8616	481.94	1.1016	4.3751	28.964
-4500	-4503	9.8206	1.8159 + 1	9278.1	3.8448 +25	481.69	1.0962 +10	4.3942 - 8	28.964
-4450	-4453	9.8204	1.8080	9268.8	3.8280	481.44	1.0909	4.4134	28.964
-4400	-4403	9.8202	1.8000	9259.4	3.8113	481.20	1.0856	4.4327	28.964
-4350	-4353	9.8201	1.7922	9250.0	3.7947	480.95	1.0803	4.4522	28.964
-4300	-4303	9.8199	1.7843	9240.7	3.7781	480.70	1.0750	4.4717	28.964
-4250	-4253	9.8198	1.7765	9231.3	3.7616	480.45	1.0697	4.4914	28.964
-4200	-4203	9.8196	1.7687	9221.9	3.7451	480.21	1.0645	4.5111	28.964
-4150	-4153	9.8195	1.7609	9212.6	3.7287	479.96	1.0593	4.5310	28.964
-4100	-4103	9.8193	1.7531	9203.2	3.7123	479.71	1.0541	4.5509	28.964
-4050	-4053	9.8192	1.7454	9193.8	3.6960	479.46	1.0489	4.5710	28.964
-4000	-4003	9.8190	1.7377 + 1	9184.5	3.6798 +25	479.22	1.0438 +10	4.5912 - 8	28.964
-3950	-3953	9.8189	1.7300	9175.1	3.6636	478.97	1.0386	4.6115	28.964
-3900	-3902	9.8187	1.7224	9165.7	3.6475	478.72	1.0335	4.6319	28.964
-3850	-3852	9.8185	1.7148	9156.4	3.6314	478.47	1.0284	4.6524	28.964
-3800	-3802	9.8184	1.7072	9147.0	3.6154	478.22	1.0234	4.6730	28.964
-3750	-3752	9.8182	1.6996	9137.6	3.5994	477.97	1.0183	4.6938	28.964
-3700	-3702	9.8181	1.6920	9128.3	3.5835	477.72	1.0133	4.7146	28.964
-3650	-3652	9.8179	1.6845	9118.9	3.5676	477.48	1.0083	4.7356	28.964
-3600	-3602	9.8178	1.6770	9109.5	3.5518	477.23	1.0033	4.7567	28.964
-3550	-3552	9.8176	1.6696	9100.1	3.5360	476.98	9.9830 + 9	4.7779	28.964
-3500	-3502	9.8175	1.6621 + 1	9090.8	3.5203 +25	476.73	9.9335 + 9	4.7992 - 8	28.964
-3450	-3452	9.8173	1.6547	9081.4	3.5047	476.48	9.8841	4.8206	28.964
-3400	-3402	9.8171	1.6473	9072.0	3.4891	476.23	9.8350	4.8422	28.964
-3350	-3352	9.8170	1.6400	9062.7	3.4735	475.98	9.7860	4.8638	28.964
-3300	-3302	9.8168	1.6326	9053.3	3.4580	475.73	9.7373	4.8856	28.964
-3250	-3252	9.8167	1.6253	9043.9	3.4426	475.48	9.6887	4.9075	28.964
-3200	-3202	9.8165	1.6180	9034.6	3.4272	475.23	9.6404	4.9296	28.964
-3150	-3152	9.8164	1.6107	9025.2	3.4119	474.98	9.5922	4.9517	28.964
-3100	-3102	9.8162	1.6035	9015.8	3.3966	474.73	9.5442	4.9740	28.964
-3050	-3051	9.8161	1.5963	9006.4	3.3814	474.48	9.4964	4.9964	28.964
-3000	-3001	9.8159	1.5891 + 1	8997.1	3.3662 +25	474.23	9.4488 + 9	5.0189 - 8	28.964
-2950	-2951	9.8158	1.5819	8987.7	3.3511	473.98	9.4013	5.0416	28.964
-2900	-2901	9.8156	1.5748	8978.3	3.3360	473.72	9.3541	5.0643	28.964
-2850	-2851	9.8155	1.5677	8969.0	3.3210	473.47	9.3071	5.0872	28.964
-2800	-2801	9.8153	1.5606	8959.6	3.3060	473.22	9.2602	5.1103	28.964
-2750	-2751	9.8151	1.5535	8950.2	3.2911	472.97	9.2136	5.1334	28.964
-2700	-2701	9.8150	1.5465	8940.8	3.2762	472.72	9.1671	5.1567	28.964
-2650	-2651	9.8148	1.5395	8931.5	3.2614	472.47	9.1208	5.1801	28.964
-2600	-2601	9.8147	1.5325	8922.1	3.2467	472.22	9.0747	5.2037	28.964
-2550	-2551	9.8145	1.5255	8912.7	3.2320	471.96	9.0287	5.2274	28.964
-2500	-2501	9.8144	1.5186 + 1	8903.3	3.2173 +25	471.71	8.9830 + 9	5.2512 - 8	28.964
-2450	-2451	9.8142	1.5117	8894.0	3.2027	471.46	8.9374	5.2751	28.964
-2400	-2401	9.8141	1.5048	8884.6	3.1882	471.21	8.8921	5.2992	28.964
-2350	-2351	9.8139	1.4979	8875.2	3.1736	470.96	8.8469	5.3234	28.964
-2300	-2301	9.8138	1.4911	8865.8	3.1592	470.70	8.8019	5.3478	28.964
-2250	-2251	9.8136	1.4842	8856.5	3.1448	470.45	8.7570	5.3723	28.964
-2200	-2201	9.8134	1.4774	8847.1	3.1304	470.20	8.7124	5.3969	28.964
-2150	-2151	9.8133	1.4707	8837.7	3.1161	469.95	8.6679	5.4217	28.964
-2100	-2101	9.8131	1.4639	8828.4	3.1019	469.69	8.6237	5.4466	28.964
-2050	-2051	9.8130	1.4572	8819.0	3.0877	469.44	8.5795	5.4716	28.964
-2000	-2001	9.8128	1.4505 + 1	8809.6	3.0735 +25	469.19	8.5356 + 9	5.4968 - 8	28.964
-1950	-1951	9.8127	1.4438	8800.2	3.0594	468.93	8.4919	5.5221	28.964
-1900	-1901	9.8125	1.4372	8790.9	3.0454	468.68	8.4483	5.5476	28.964
-1850	-1851	9.8124	1.4305	8781.5	3.0314	468.43	8.4049	5.5732	28.964
-1800	-1801	9.8122	1.4239	8772.1	3.0174	468.17	8.3617	5.5990	28.964
-1750	-1751	9.8121	1.4173	8762.7	3.0035	467.92	8.3187	5.6249	28.964
-1700	-1701	9.8119	1.4108	8753.4	2.9897	467.66	8.2758	5.6510	28.964
-1650	-1651	9.8117	1.4043	8744.0	2.9759	467.41	8.2331	5.6772	28.964
-1600	-1601	9.8116	1.3977	8734.6	2.9621	467.16	8.1906	5.7036	28.964
-1550	-1551	9.8114	1.3912	8725.2	2.9484	466.90	8.1483	5.7301	28.964
-1500	-1501	9.8113	1.3848 + 1	8715.9	2.9348 +25	466.65	8.1061 + 9	5.7567 - 8	28.964
-1450	-1451	9.8111	1.3783	8706.5	2.9212	466.39	8.0641	5.7836	28.964
-1400	-1401	9.8110	1.3719	8697.1	2.9076	466.14	8.0223	5.8105	28.964
-1350	-1351	9.8108	1.3655	8687.7	2.8941	465.88	7.9806	5.8377	28.964
-1300	-1301	9.8107	1.3591	8678.3	2.8806	465.63	7.9392	5.8649	28.964
-1250	-1251	9.8105	1.3528	8669.0	2.8672	465.37	7.8979	5.8924	28.964
-1200	-1201	9.8104	1.3465	8659.6	2.8538	465.12	7.8567	5.9200	28.964
-1150	-1151	9.8102	1.3402	8650.2	2.8405	464.86	7.8158	5.9477	28.964
-1100	-1101	9.8100	1.3339	8640.8	2.8273	464.60	7.7750	5.9756	28.964
-1050	-1051	9.8099	1.3276	8631.5	2.8140	464.35	7.7343	6.0037	28.964

TABLE II.—Continued

## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
H, m	Z, m								
-1000	-1000	9.8097	1.3214 + 1	8622.1	2.8008 +25	464.09	7.6938 + 9	6.0321 - 8	28.964
-950	-950	9.8096	1.3152	8612.7	2.7877	463.84	7.6535	6.0605	28.964
-900	-900	9.8094	1.3090	8603.3	2.7746	463.58	7.6134	6.0890	28.964
-850	-850	9.8093	1.3028	8593.9	2.7616	463.32	7.5734	6.1178	28.964
-800	-800	9.8091	1.2967	8584.6	2.7486	463.07	7.5337	6.1467	28.964
-750	-750	9.8090	1.2905	8575.2	2.7357	462.81	7.4940	6.1757	28.964
-700	-700	9.8088	1.2844	8565.8	2.7228	462.55	7.4546	6.2050	28.964
-650	-650	9.8087	1.2783	8556.4	2.7099	462.30	7.4153	6.2344	28.964
-600	-600	9.8085	1.2723	8547.1	2.6971	462.04	7.3762	6.2639	28.964
-550	-550	9.8083	1.2663	8537.7	2.6844	461.78	7.3372	6.2937	28.964
-500	-500	9.8082	1.2602 + 1	8528.3	2.6717 +25	461.53	7.2984 + 9	6.3236 - 8	28.964
-450	-450	9.8080	1.2543	8518.9	2.6590	461.27	7.2598	6.3537	28.964
-400	-400	9.8079	1.2483	8509.5	2.6464	461.01	7.2213	6.3840	28.964
-350	-350	9.8077	1.2423	8500.2	2.6338	460.75	7.1830	6.4145	28.964
-300	-300	9.8076	1.2364	8490.8	2.6213	460.49	7.1449	6.4451	28.964
-250	-250	9.8074	1.2305	8481.4	2.6088	460.24	7.1069	6.4759	28.964
-200	-200	9.8073	1.2246	8472.0	2.5964	459.98	7.0691	6.5069	28.964
-150	-150	9.8071	1.2188	8462.6	2.5840	459.72	7.0314	6.5381	28.964
-100	-100	9.8070	1.2129	8453.3	2.5717	459.46	6.9939	6.5695	28.964
-50	-50	9.8068	1.2071	8443.9	2.5594	459.20	6.9565	6.6010	28.964
0	0	9.8066	1.2013 + 1	8434.5	2.5471 +25	458.94	6.9193 + 9	6.6328 - 8	28.964
50	50	9.8065	1.1955	8425.1	2.5349	458.69	6.8823	6.6647	28.964
100	100	9.8063	1.1898	8415.7	2.5228	458.43	6.8454	6.6968	28.964
150	150	9.8062	1.1841	8406.4	2.5107	458.17	6.8087	6.7292	28.964
200	200	9.8060	1.1783	8397.0	2.4986	457.91	6.7721	6.7617	28.964
250	250	9.8059	1.1727	8387.6	2.4866	457.65	6.7357	6.7944	28.964
300	300	9.8057	1.1670	8378.2	2.4746	457.39	6.6995	6.8273	28.964
350	350	9.8056	1.1613	8368.8	2.4627	457.13	6.6633	6.8604	28.964
400	400	9.8054	1.1557	8359.5	2.4508	456.87	6.6274	6.8936	28.964
450	450	9.8053	1.1501	8350.1	2.4389	456.61	6.5916	6.9271	28.964
500	500	9.8051	1.1445 + 1	8340.7	2.4271 +25	456.35	6.5560 + 9	6.9608 - 8	28.964
550	550	9.8050	1.1390	8331.3	2.4153	456.09	6.5205	6.9947	28.964
600	600	9.8048	1.1334	8321.9	2.4036	455.83	6.4851	7.0288	28.964
650	650	9.8046	1.1279	8312.5	2.3919	455.57	6.4499	7.0631	28.964
700	700	9.8045	1.1224	8303.2	2.3803	455.31	6.4149	7.0976	28.964
750	750	9.8043	1.1169	8293.8	2.3687	455.05	6.3800	7.1324	28.964
800	800	9.8042	1.1114	8284.4	2.3572	454.78	6.3453	7.1673	28.964
850	850	9.8040	1.1060	8275.0	2.3457	454.52	6.3107	7.2024	28.964
900	900	9.8039	1.1006	8265.6	2.3342	454.26	6.2762	7.2378	28.964
950	950	9.8037	1.0952	8256.2	2.3228	454.00	6.2420	7.2734	28.964
1000	1000	9.8036	1.0898 + 1	8246.8	2.3114 +25	453.74	6.2078 + 9	7.3092 - 8	28.964
1050	1050	9.8034	1.0844	8237.5	2.3001	453.48	6.1738	7.3452	28.964
1100	1100	9.8033	1.0791	8228.1	2.2888	453.21	6.1400	7.3814	28.964
1150	1150	9.8031	1.0738	8218.7	2.2776	452.95	6.1063	7.4178	28.964
1200	1200	9.8029	1.0685	8209.3	2.2664	452.69	6.0727	7.4545	28.964
1250	1250	9.8028	1.0632	8199.9	2.2552	452.43	6.0393	7.4914	28.964
1300	1300	9.8026	1.0580	8190.5	2.2441	452.17	6.0061	7.5285	28.964
1350	1350	9.8025	1.0527	8181.1	2.2330	451.90	5.9729	7.5658	28.964
1400	1400	9.8023	1.0475	8171.7	2.2220	451.64	5.9400	7.6034	28.964
1450	1450	9.8022	1.0423	8162.3	2.2110	451.38	5.9071	7.6412	28.964
1500	1500	9.8020	1.0371 + 1	8153.0	2.2000 +25	451.11	5.8744 + 9	7.6793 - 8	28.964
1550	1550	9.8019	1.0320	8143.6	2.1891	450.85	5.8419	7.7175	28.964
1600	1600	9.8017	1.0268	8134.2	2.1783	450.59	5.8095	7.7560	28.964
1650	1650	9.8016	1.0217	8124.8	2.1674	450.32	5.7772	7.7948	28.964
1700	1700	9.8014	1.0166	8115.4	2.1566	450.06	5.7451	7.8338	28.964
1750	1750	9.8013	1.0115	8106.0	2.1459	449.79	5.7131	7.8730	28.964
1800	1800	9.8011	1.0065	8096.6	2.1352	449.53	5.6813	7.9124	28.964
1850	1850	9.8009	1.0014	8087.2	2.1245	449.27	5.6496	7.9522	28.964
1900	1900	9.8008	9.9640 + 0	8077.8	2.1139	449.00	5.6181	7.9921	28.964
1950	1950	9.8006	9.9139	8068.4	2.1033	448.74	5.5866	8.0323	28.964
2000	2000	9.8005	9.8641 + 0	8059.1	2.0928 +25	448.47	5.5554 + 9	8.0728 - 8	28.964
2050	2050	9.8003	9.8144	8049.7	2.0823	448.21	5.5242	8.1135	28.964
2100	2100	9.8002	9.7650	8040.3	2.0718	447.94	5.4932	8.1544	28.964
2150	2150	9.8000	9.7157	8030.9	2.0614	447.68	5.4624	8.1957	28.964
2200	2200	9.7999	9.6667	8021.5	2.0510	447.41	5.4316	8.2371	28.964
2250	2250	9.7997	9.6178	8012.1	2.0407	447.15	5.4011	8.2789	28.964
2300	2300	9.7996	9.5691	8002.7	2.0304	446.88	5.3706	8.3209	28.964
2350	2350	9.7994	9.5206	7993.3	2.0201	446.61	5.3403	8.3631	28.964
2400	2400	9.7992	9.4723	7983.9	2.0099	446.35	5.3101	8.4056	28.964
2450	2450	9.7991	9.4241	7974.5	1.9997	446.08	5.2801	8.4484	28.964
2500	2500	9.7989	9.3762 + 0	7965.1	1.9896 +25	445.82	5.2501 + 9	8.4915 - 8	28.964
2550	2550	9.7988	9.3284	7955.7	1.9795	445.55	5.2204	8.5348	28.964
2600	2600	9.7986	9.2809	7946.3	1.9694	445.28	5.1907	8.5784	28.964
2650	2650	9.7985	9.2335	7936.9	1.9594	445.02	5.1612	8.6223	28.964
2700	2700	9.7983	9.1863	7927.5	1.9494	444.75	5.1318	8.6665	28.964
2750	2750	9.7982	9.1393	7918.1	1.9395	444.48	5.1026	8.7109	28.964
2800	2800	9.7980	9.0925	7908.7	1.9296	444.21	5.0735	8.7556	28.964
2850	2850	9.7979	9.0458	7899.3	1.9197	443.95	5.0445	8.8006	28.964
2900	2900	9.7977	8.9994	7889.9	1.9099	443.68	5.0156	8.8459	28.964
2950	2950	9.7975	8.9531	7880.5	1.9001	443.41	4.9869	8.8915	28.964

TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
-1000	-1000	9.8097	1.3214 + 1	8622.1	2.8009 +25	464.09	7.6939 + 9	6.0320 - 8	28.964
-950	-950	9.8096	1.3152	8612.7	2.7877	463.84	7.6536	6.0604	28.964
-900	-900	9.8094	1.3090	8603.3	2.7746	463.58	7.6135	6.0889	28.964
-850	-850	9.8093	1.3028	8594.0	2.7616	463.32	7.5735	6.1177	28.964
-800	-800	9.8091	1.2967	8584.6	2.7486	463.07	7.5337	6.1466	28.964
-750	-750	9.8090	1.2905	8575.2	2.7357	462.81	7.4941	6.1757	28.964
-700	-700	9.8088	1.2844	8565.8	2.7228	462.55	7.4547	6.2049	28.964
-650	-650	9.8087	1.2784	8556.4	2.7099	462.30	7.4154	6.2343	28.964
-600	-600	9.8085	1.2723	8547.1	2.6971	462.04	7.3762	6.2639	28.964
-550	-550	9.8083	1.2663	8537.7	2.6844	461.78	7.3373	6.2937	28.964
-500	-500	9.8082	1.2603 + 1	8528.3	2.6717 +25	461.53	7.2985 + 9	6.3236 - 8	28.964
-450	-450	9.8080	1.2543	8518.9	2.6590	461.27	7.2598	6.3537	28.964
-400	-400	9.8079	1.2483	8509.5	2.6464	461.01	7.2214	6.3840	28.964
-350	-350	9.8077	1.2423	8500.2	2.6338	460.75	7.1830	6.4145	28.964
-300	-300	9.8076	1.2364	8490.8	2.6213	460.49	7.1449	6.4451	28.964
-250	-250	9.8074	1.2305	8481.4	2.6088	460.24	7.1069	6.4759	28.964
-200	-200	9.8073	1.2246	8472.0	2.5964	459.98	7.0691	6.5069	28.964
-150	-150	9.8071	1.2188	8462.6	2.5840	459.72	7.0314	6.5381	28.964
-100	-100	9.8070	1.2129	8453.3	2.5717	459.46	6.9939	6.5695	28.964
-50	-50	9.8068	1.2071	8443.9	2.5594	459.20	6.9565	6.6010	28.964
0	0	9.8066	1.2013 + 1	8434.5	2.5471 +25	458.94	6.9193 + 9	6.6328 - 8	28.964
50	50	9.8065	1.1955	8425.1	2.5349	458.69	6.8823	6.6647	28.964
100	100	9.8063	1.1898	8415.7	2.5228	458.43	6.8454	6.6968	28.964
150	150	9.8062	1.1841	8406.4	2.5107	458.17	6.8087	6.7292	28.964
200	200	9.8060	1.1783	8397.0	2.4986	457.91	6.7721	6.7617	28.964
250	250	9.8059	1.1727	8387.6	2.4866	457.65	6.7357	6.7944	28.964
300	300	9.8057	1.1670	8378.2	2.4746	457.39	6.6995	6.8273	28.964
350	350	9.8056	1.1613	8368.8	2.4627	457.13	6.6634	6.8603	28.964
400	400	9.8054	1.1557	8359.5	2.4508	456.87	6.6274	6.8936	28.964
450	450	9.8053	1.1501	8350.1	2.4389	456.61	6.5916	6.9271	28.964
500	500	9.8051	1.1445 + 1	8340.7	2.4271 +25	456.35	6.5560 + 9	6.9608 - 8	28.964
550	550	9.8050	1.1390	8331.3	2.4154	456.09	6.5205	6.9947	28.964
600	600	9.8048	1.1334	8321.9	2.4036	455.83	6.4852	7.0288	28.964
650	650	9.8046	1.1279	8312.5	2.3920	455.57	6.4500	7.0631	28.964
700	700	9.8045	1.1224	8303.2	2.3803	455.31	6.4150	7.0976	28.964
750	750	9.8043	1.1169	8293.8	2.3688	455.05	6.3801	7.1323	28.964
800	800	9.8042	1.1115	8284.4	2.3572	454.79	6.3453	7.1672	28.964
850	850	9.8040	1.1060	8275.0	2.3457	454.52	6.3108	7.2024	28.964
900	900	9.8039	1.1006	8265.6	2.3343	454.26	6.2763	7.2377	28.964
950	950	9.8037	1.0952	8256.3	2.3228	454.00	6.2421	7.2733	28.964
1000	1000	9.8036	1.0898 + 1	8246.9	2.3115 +25	453.74	6.2079 + 9	7.3090 - 8	28.964
1050	1050	9.8034	1.0845	8237.5	2.3001	453.48	6.1739	7.3450	28.964
1100	1100	9.8033	1.0791	8228.1	2.2889	453.22	6.1401	7.3812	28.964
1150	1150	9.8031	1.0738	8218.7	2.2776	452.95	6.1064	7.4177	28.964
1200	1200	9.8029	1.0685	8209.3	2.2664	452.69	6.0729	7.4543	28.964
1250	1250	9.8028	1.0632	8199.9	2.2553	452.43	6.0395	7.4912	28.964
1300	1300	9.8026	1.0580	8190.6	2.2442	452.17	6.0062	7.5283	28.964
1350	1350	9.8025	1.0527	8181.2	2.2331	451.90	5.9731	7.5656	28.964
1400	1400	9.8023	1.0475	8171.8	2.2221	451.64	5.9402	7.6032	28.964
1450	1450	9.8022	1.0423	8162.4	2.2111	451.38	5.9073	7.6410	28.964
1500	1500	9.8020	1.0372 + 1	8153.0	2.2001 +25	451.12	5.8747 + 9	7.6790 - 8	28.964
1550	1550	9.8019	1.0320	8143.6	2.1892	450.85	5.8421	7.7172	28.964
1600	1600	9.8017	1.0269	8134.3	2.1783	450.59	5.8098	7.7557	28.964
1650	1650	9.8016	1.0217	8124.9	2.1675	450.32	5.7775	7.7944	28.964
1700	1700	9.8014	1.0166	8115.5	2.1567	450.06	5.7454	7.8334	28.964
1750	1750	9.8013	1.0116	8106.1	2.1460	449.80	5.7135	7.8726	28.964
1800	1799	9.8011	1.0065	8096.7	2.1353	449.53	5.6816	7.9120	28.964
1850	1849	9.8009	1.0015	8087.3	2.1247	449.27	5.6500	7.9517	28.964
1900	1899	9.8008	9.9645 + 0	8077.9	2.1140	449.00	5.6184	7.9917	28.964
1950	1949	9.8006	9.9145	8068.6	2.1035	448.74	5.5870	8.0318	28.964
2000	1999	9.8005	9.8647 + 0	8059.2	2.0929 +25	448.48	5.5558 + 9	8.0723 - 8	28.964
2050	2049	9.8003	9.8151	8049.8	2.0824	448.21	5.5246	8.1129	28.964
2100	2099	9.8002	9.7657	8040.4	2.0720	447.95	5.4937	8.1539	28.964
2150	2149	9.8000	9.7164	8031.0	2.0616	447.68	5.4628	8.1951	28.964
2200	2199	9.7999	9.6674	8021.6	2.0512	447.42	5.4321	8.2365	28.964
2250	2249	9.7997	9.6185	8012.2	2.0409	447.15	5.4015	8.2782	28.964
2300	2299	9.7996	9.5699	8002.8	2.0306	446.88	5.3711	8.3202	28.964
2350	2349	9.7994	9.5214	7993.5	2.0203	446.62	5.3408	8.3624	28.964
2400	2399	9.7992	9.4731	7984.1	2.0101	446.35	5.3106	8.4049	28.964
2450	2449	9.7991	9.4250	7974.7	1.9999	446.09	5.2806	8.4476	28.964
2500	2499	9.7989	9.3771 + 0	7965.3	1.9898 +25	445.82	5.2507 + 9	8.4906 - 8	28.964
2550	2549	9.7988	9.3294	7955.9	1.9797	445.55	5.2210	8.5339	28.964
2600	2599	9.7986	9.2819	7946.5	1.9696	445.29	5.1913	8.5775	28.964
2650	2649	9.7985	9.2345	7937.1	1.9596	445.02	5.1619	8.6213	28.964
2700	2699	9.7983	9.1874	7927.7	1.9497	444.75	5.1325	8.6655	28.964
2750	2749	9.7982	9.1404	7918.4	1.9397	444.49	5.1033	8.7099	28.964
2800	2799	9.7980	9.0936	7909.0	1.9298	444.22	5.0742	8.7545	28.964
2850	2849	9.7979	9.0470	7899.6	1.9200	443.95	5.0452	8.7995	28.964
2900	2899	9.7977	9.0006	7890.2	1.9101	443.69	5.0164	8.8447	28.964
2950	2949	9.7976	8.9544	7880.8	1.9004	443.42	4.9877	8.8903	28.964



TABLE II.—Continued

## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, m \sec^{-2}$	Specific weight $\omega, kg \ m^{-2} \ sec^{-2}$	Pressure scale height $H_p, m$	Number density $n, m^{-3}$	Particle speed $\bar{V}, m \ sec^{-1}$	Collision frequency $\nu, sec^{-1}$	Mean free path $L, m$	Molecular weight $M$
$H, m$	$Z, m$								
3000	3001	9.7974	8.9070 + 0	7871.1	1.8903 +25	443.14	4.9583 + 9	8.9374 - 8	28.964
3050	3051	9.7972	8.8611	7861.7	1.8806	442.88	4.9299	8.9835	28.964
3100	3102	9.7971	8.8154	7852.3	1.8709	442.61	4.9015	9.0300	28.964
3150	3152	9.7969	8.7698	7842.9	1.8613	442.34	4.8733	9.0767	28.964
3200	3202	9.7968	8.7245	7833.6	1.8517	442.07	4.8452	9.1238	28.964
3250	3252	9.7966	8.6793	7824.2	1.8422	441.80	4.8173	9.1712	28.964
3300	3302	9.7965	8.6343	7814.8	1.8326	441.53	4.7895	9.2188	28.964
3350	3352	9.7963	8.5895	7805.4	1.8231	441.26	4.7618	9.2668	28.964
3400	3402	9.7962	8.5448	7796.0	1.8137	440.99	4.7342	9.3150	28.964
3450	3452	9.7960	8.5004	7786.5	1.8043	440.72	4.7068	9.3636	28.964
3500	3502	9.7959	8.4561 + 0	7777.1	1.7949 +25	440.45	4.6795 + 9	9.4125 - 8	28.964
3550	3552	9.7957	8.4119	7767.7	1.7856	440.19	4.6523	9.4617	28.964
3600	3602	9.7955	8.3680	7758.3	1.7763	439.92	4.6252	9.5113	28.964
3650	3652	9.7954	8.3242	7748.9	1.7670	439.65	4.5983	9.5611	28.964
3700	3702	9.7952	8.2807	7739.5	1.7578	439.37	4.5714	9.6113	28.964
3750	3752	9.7951	8.2372	7730.1	1.7486	439.10	4.5447	9.6618	28.964
3800	3802	9.7949	8.1940	7720.7	1.7395	438.83	4.5182	9.7126	28.964
3850	3852	9.7948	8.1510	7711.3	1.7303	438.56	4.4917	9.7638	28.964
3900	3902	9.7946	8.1081	7701.9	1.7213	438.29	4.4654	9.8153	28.964
3950	3952	9.7945	8.0653	7692.5	1.7122	438.02	4.4392	9.8671	28.964
4000	4003	9.7943	8.0228 + 0	7683.1	1.7032 +25	437.75	4.4131 + 9	9.9193 - 8	28.964
4050	4053	9.7942	7.9804	7673.7	1.6942	437.48	4.3872	9.9718	28.964
4100	4103	9.7940	7.9382	7664.3	1.6853	437.21	4.3613	1.0025 - 7	28.964
4150	4153	9.7938	7.8962	7654.9	1.6764	436.93	4.3356	1.0078	28.964
4200	4203	9.7937	7.8544	7645.5	1.6676	436.66	4.3100	1.0131	28.964
4250	4253	9.7935	7.8127	7636.1	1.6587	436.39	4.2845	1.0185	28.964
4300	4303	9.7934	7.7711	7626.7	1.6499	436.12	4.2592	1.0240	28.964
4350	4353	9.7932	7.7298	7617.3	1.6412	435.85	4.2339	1.0294	28.964
4400	4403	9.7931	7.6886	7607.9	1.6325	435.57	4.2088	1.0349	28.964
4450	4453	9.7929	7.6476	7598.5	1.6238	435.30	4.1838	1.0404	28.964
4500	4503	9.7928	7.6068 + 0	7589.1	1.6151 +25	435.03	4.1589 + 9	1.0460 - 7	28.964
4550	4553	9.7926	7.5661	7579.7	1.6065	434.75	4.1341	1.0516	28.964
4600	4603	9.7925	7.5256	7570.3	1.5980	434.48	4.1095	1.0573	28.964
4650	4653	9.7923	7.4852	7560.8	1.5894	434.21	4.0849	1.0629	28.964
4700	4703	9.7922	7.4451	7551.4	1.5809	433.93	4.0605	1.0687	28.964
4750	4754	9.7920	7.4051	7542.0	1.5724	433.66	4.0362	1.0744	28.964
4800	4804	9.7918	7.3652	7532.6	1.5640	433.39	4.0120	1.0802	28.964
4850	4854	9.7917	7.3255	7523.2	1.5556	433.11	3.9880	1.0861	28.964
4900	4904	9.7915	7.2860	7513.8	1.5472	432.84	3.9640	1.0919	28.964
4950	4954	9.7914	7.2467	7504.4	1.5389	432.56	3.9401	1.0978	28.964
5000	5004	9.7912	7.2075 + 0	7495.0	1.5306 +25	432.29	3.9164 + 9	1.1038 - 7	28.964
5050	5054	9.7911	7.1684	7485.6	1.5223	432.01	3.8928	1.1098	28.964
5100	5104	9.7909	7.1296	7476.2	1.5141	431.74	3.8693	1.1158	28.964
5150	5154	9.7908	7.0909	7466.7	1.5059	431.46	3.8459	1.1219	28.964
5200	5204	9.7906	7.0523	7457.3	1.4978	431.19	3.8226	1.1280	28.964
5250	5254	9.7905	7.0140	7447.9	1.4896	430.91	3.7994	1.1342	28.964
5300	5304	9.7903	6.9757	7438.5	1.4815	430.64	3.7764	1.1404	28.964
5350	5355	9.7901	6.9377	7429.1	1.4735	430.36	3.7534	1.1466	28.964
5400	5405	9.7900	6.8998	7419.7	1.4654	430.08	3.7306	1.1529	28.964
5450	5455	9.7898	6.8620	7410.3	1.4575	429.81	3.7078	1.1592	28.964
5500	5505	9.7897	6.8244 + 0	7400.9	1.4495 +25	429.53	3.6852 + 9	1.1656 - 7	28.964
5550	5555	9.7895	6.7870	7391.4	1.4416	429.26	3.6627	1.1720	28.964
5600	5605	9.7894	6.7497	7382.0	1.4337	428.98	3.6403	1.1784	28.964
5650	5655	9.7892	6.7126	7372.6	1.4258	428.70	3.6180	1.1849	28.964
5700	5705	9.7891	6.6757	7363.2	1.4180	428.42	3.5958	1.1915	28.964
5750	5755	9.7889	6.6389	7353.8	1.4102	428.15	3.5737	1.1980	28.964
5800	5805	9.7888	6.6022	7344.4	1.4024	427.87	3.5518	1.2047	28.964
5850	5855	9.7886	6.5657	7335.0	1.3947	427.59	3.5299	1.2113	28.964
5900	5905	9.7885	6.5294	7325.5	1.3870	427.31	3.5081	1.2181	28.964
5950	5956	9.7883	6.4932	7316.1	1.3793	427.04	3.4865	1.2248	28.964
6000	6006	9.7881	6.4572 + 0	7306.7	1.3717 +25	426.76	3.4649 + 9	1.2317 - 7	28.964
6050	6056	9.7880	6.4213	7297.3	1.3641	426.48	3.4435	1.2385	28.964
6100	6106	9.7878	6.3856	7287.9	1.3565	426.20	3.4221	1.2454	28.964
6150	6156	9.7877	6.3500	7278.5	1.3490	425.92	3.4009	1.2524	28.964
6200	6206	9.7875	6.3146	7269.1	1.3415	425.64	3.3798	1.2594	28.964
6250	6256	9.7874	6.2794	7259.6	1.3340	425.36	3.3588	1.2664	28.964
6300	6306	9.7872	6.2443	7250.2	1.3266	425.08	3.3378	1.2735	28.964
6350	6356	9.7871	6.2093	7240.8	1.3192	424.80	3.3170	1.2807	28.964
6400	6406	9.7869	6.1745	7231.4	1.3118	424.53	3.2963	1.2879	28.964
6450	6457	9.7868	6.1398	7222.0	1.3045	424.25	3.2757	1.2951	28.964
6500	6507	9.7866	6.1053 + 0	7212.5	1.2972 +25	423.97	3.2552 + 9	1.3024 - 7	28.964
6550	6557	9.7864	6.0709	7203.1	1.2899	423.68	3.2348	1.3098	28.964
6600	6607	9.7863	6.0367	7193.7	1.2826	423.40	3.2145	1.3172	28.964
6650	6657	9.7861	6.0027	7184.3	1.2754	423.12	3.1942	1.3246	28.964
6700	6707	9.7860	5.9687	7174.9	1.2682	422.84	3.1741	1.3322	28.964
6750	6757	9.7858	5.9350	7165.4	1.2611	422.56	3.1541	1.3397	28.964
6800	6807	9.7857	5.9013	7156.0	1.2539	422.28	3.1342	1.3473	28.964
6850	6857	9.7855	5.8679	7146.6	1.2468	422.00	3.1144	1.3550	28.964
6900	6907	9.7854	5.8345	7137.2	1.2398	421.72	3.0947	1.3627	28.964
6950	6958	9.7852	5.8013	7127.8	1.2328	421.44	3.0751	1.3705	28.964

TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{m sec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
3000	2999	9.7974	8.9083 + 0	7871.4	1.8906 +25	443.15	4.9591 + 9	8.9361 - 8	28.964
3050	3049	9.7972	8.8625	7862.0	1.8809	442.88	4.9307	8.9822	28.964
3100	3098	9.7971	8.8168	7852.6	1.8712	442.62	4.9024	9.0286	28.964
3150	3148	9.7969	8.7713	7843.2	1.8616	442.35	4.8742	9.0753	28.964
3200	3198	9.7968	8.7259	7833.9	1.8520	442.08	4.8461	9.1223	28.964
3250	3248	9.7966	8.6808	7824.5	1.8425	441.81	4.8182	9.1696	28.964
3300	3298	9.7965	8.6358	7815.1	1.8330	441.54	4.7904	9.2172	28.964
3350	3348	9.7963	8.5910	7805.7	1.8235	441.27	4.7628	9.2651	28.964
3400	3398	9.7962	8.5464	7796.3	1.8140	441.00	4.7352	9.3133	28.964
3450	3448	9.7960	8.5020	7786.9	1.8046	440.73	4.7078	9.3618	28.964
3500	3498	9.7959	8.4578 + 0	7777.5	1.7953 +25	440.47	4.6805 + 9	9.4106 - 8	28.964
3550	3548	9.7957	8.4137	7768.1	1.7859	440.20	4.6533	9.4598	28.964
3600	3598	9.7956	8.3698	7758.7	1.7767	439.93	4.6263	9.5092	28.964
3650	3648	9.7954	8.3261	7749.3	1.7674	439.66	4.5994	9.5590	28.964
3700	3698	9.7952	8.2825	7739.9	1.7582	439.39	4.5726	9.6091	28.964
3750	3748	9.7951	8.2392	7730.6	1.7490	439.12	4.5459	9.6596	28.964
3800	3798	9.7949	8.1960	7721.2	1.7399	438.85	4.5194	9.7103	28.964
3850	3848	9.7948	8.1530	7711.8	1.7308	438.58	4.4930	9.7614	28.964
3900	3898	9.7946	8.1101	7702.4	1.7217	438.31	4.4667	9.8128	28.964
3950	3948	9.7945	8.0674	7693.0	1.7127	438.03	4.4405	9.8646	28.964
4000	3997	9.7943	8.0249 + 0	7683.6	1.7037 +25	437.76	4.4144 + 9	9.9166 - 8	28.964
4050	4047	9.7942	7.9826	7674.2	1.6947	437.49	4.3885	9.9691	28.964
4100	4097	9.7940	7.9405	7664.8	1.6858	437.22	4.3627	1.0022 - 7	28.964
4150	4147	9.7939	7.8985	7655.4	1.6769	436.95	4.3370	1.0075	28.964
4200	4197	9.7937	7.8567	7646.0	1.6680	436.68	4.3114	1.0128	28.964
4250	4247	9.7935	7.8150	7636.6	1.6592	436.41	4.2860	1.0182	28.964
4300	4297	9.7934	7.7736	7627.2	1.6505	436.13	4.2606	1.0236	28.964
4350	4347	9.7932	7.7323	7617.8	1.6417	435.86	4.2354	1.0291	28.964
4400	4397	9.7931	7.6911	7608.5	1.6330	435.59	4.2103	1.0346	28.964
4450	4447	9.7929	7.6502	7599.1	1.6243	435.32	4.1854	1.0401	28.964
4500	4497	9.7928	7.6094 + 0	7589.7	1.6157 +25	435.05	4.1605 + 9	1.0457 - 7	28.964
4550	4547	9.7926	7.5687	7580.3	1.6071	434.77	4.1357	1.0513	28.964
4600	4597	9.7925	7.5283	7570.9	1.5985	434.50	4.1111	1.0569	28.964
4650	4647	9.7923	7.4880	7561.5	1.5900	434.23	4.0866	1.0626	28.964
4700	4697	9.7922	7.4479	7552.1	1.5815	433.95	4.0622	1.0683	28.964
4750	4746	9.7920	7.4079	7542.7	1.5730	433.68	4.0379	1.0740	28.964
4800	4796	9.7919	7.3681	7533.3	1.5646	433.41	4.0138	1.0798	28.964
4850	4846	9.7917	7.3285	7523.9	1.5562	433.13	3.9897	1.0856	28.964
4900	4896	9.7915	7.2890	7514.5	1.5479	432.86	3.9658	1.0915	28.964
4950	4946	9.7914	7.2497	7505.1	1.5395	432.58	3.9420	1.0974	28.964
5000	4996	9.7912	7.2105 + 0	7495.7	1.5313 +25	432.31	3.9183 + 9	1.1033 - 7	28.964
5050	5046	9.7911	7.1716	7486.3	1.5230	432.04	3.8947	1.1093	28.964
5100	5096	9.7909	7.1328	7476.9	1.5148	431.76	3.8712	1.1153	28.964
5150	5146	9.7908	7.0941	7467.5	1.5066	431.49	3.8478	1.1214	28.964
5200	5196	9.7906	7.0556	7458.1	1.4984	431.21	3.8246	1.1275	28.964
5250	5246	9.7905	7.0173	7448.7	1.4903	430.94	3.8014	1.1336	28.964
5300	5296	9.7903	6.9791	7439.3	1.4822	430.66	3.7784	1.1398	28.964
5350	5346	9.7902	6.9411	7429.9	1.4742	430.39	3.7555	1.1460	28.964
5400	5395	9.7900	6.9032	7420.6	1.4662	430.11	3.7327	1.1523	28.964
5450	5445	9.7899	6.8655	7411.2	1.4582	429.83	3.7099	1.1586	28.964
5500	5495	9.7897	6.8280 + 0	7401.8	1.4502 +25	429.56	3.6874 + 9	1.1650 - 7	28.964
5550	5545	9.7895	6.7906	7392.4	1.4423	429.28	3.6649	1.1713	28.964
5600	5595	9.7894	6.7534	7383.0	1.4344	429.01	3.6425	1.1778	28.964
5650	5645	9.7892	6.7164	7373.6	1.4266	428.73	3.6202	1.1843	28.964
5700	5695	9.7891	6.6794	7364.2	1.4188	428.45	3.5981	1.1908	28.964
5750	5745	9.7889	6.6427	7354.8	1.4110	428.18	3.5760	1.1974	28.964
5800	5795	9.7888	6.6061	7345.4	1.4032	427.90	3.5541	1.2040	28.964
5850	5845	9.7886	6.5697	7336.0	1.3955	427.62	3.5322	1.2106	28.964
5900	5895	9.7885	6.5334	7326.6	1.3878	427.34	3.5105	1.2173	28.964
5950	5944	9.7883	6.4973	7317.2	1.3802	427.07	3.4889	1.2241	28.964
6000	5994	9.7882	6.4613 + 0	7307.8	1.3726 +25	426.79	3.4674 + 9	1.2309 - 7	28.964
6050	6044	9.7880	6.4255	7298.4	1.3650	426.51	3.4459	1.2377	28.964
6100	6094	9.7879	6.3898	7289.0	1.3574	426.23	3.4246	1.2446	28.964
6150	6144	9.7877	6.3543	7279.6	1.3499	425.96	3.4034	1.2515	28.964
6200	6194	9.7875	6.3189	7270.2	1.3424	425.68	3.3823	1.2585	28.964
6250	6244	9.7874	6.2837	7260.8	1.3350	425.40	3.3613	1.2656	28.964
6300	6294	9.7872	6.2486	7251.4	1.3275	425.12	3.3404	1.2726	28.964
6350	6344	9.7871	6.2137	7242.0	1.3201	424.84	3.3196	1.2798	28.964
6400	6394	9.7869	6.1790	7232.6	1.3128	424.56	3.2990	1.2870	28.964
6450	6443	9.7868	6.1443	7223.2	1.3054	424.28	3.2784	1.2942	28.964
6500	6493	9.7866	6.1099 + 0	7213.8	1.2981 +25	424.00	3.2579 + 9	1.3015 - 7	28.964
6550	6543	9.7865	6.0756	7204.4	1.2909	423.72	3.2375	1.3088	28.964
6600	6593	9.7863	6.0414	7195.0	1.2836	423.44	3.2172	1.3162	28.964
6650	6643	9.7862	6.0074	7185.6	1.2764	423.16	3.1970	1.3236	28.964
6700	6693	9.7860	5.9735	7176.2	1.2692	422.88	3.1770	1.3311	28.964
6750	6743	9.7859	5.9398	7166.8	1.2621	422.60	3.1570	1.3386	28.964
6800	6793	9.7857	5.9062	7157.4	1.2550	422.32	3.1371	1.3462	28.964
6850	6843	9.7855	5.8728	7148.0	1.2479	422.04	3.1173	1.3539	28.964
6900	6893	9.7854	5.8395	7138.6	1.2408	421.76	3.0976	1.3616	28.964
6950	6942	9.7852	5.8064	7129.2	1.2338	421.48	3.0781	1.3693	28.964

TABLE II.—Continued

## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
H, m	Z, m								
7000	7008	9.7851	5.7683 + 0	7118.3	1.2257 +25	421.15	3.0556 + 9	1.3783 - 7	28.964
7050	7058	9.7849	5.7354	7108.9	1.2188	420.87	3.0362	1.3862	28.964
7100	7108	9.7848	5.7026	7099.5	1.2118	420.59	3.0168	1.3941	28.964
7150	7158	9.7846	5.6700	7090.1	1.2049	420.31	2.9976	1.4021	28.964
7200	7208	9.7844	5.6376	7080.6	1.1980	420.02	2.9785	1.4102	28.964
7250	7258	9.7843	5.6052	7071.2	1.1912	419.74	2.9595	1.4183	28.964
7300	7308	9.7841	5.5731	7061.8	1.1844	419.46	2.9405	1.4265	28.964
7350	7359	9.7840	5.5410	7052.4	1.1776	419.18	2.9217	1.4347	28.964
7400	7409	9.7838	5.5091	7043.0	1.1708	418.89	2.9030	1.4430	28.964
7450	7459	9.7837	5.4774	7033.5	1.1641	418.61	2.8843	1.4513	28.964
7500	7509	9.7835	5.4457 + 0	7024.1	1.1574 +25	418.32	2.8658 + 9	1.4597 - 7	28.964
7550	7559	9.7834	5.4143	7014.7	1.1507	418.04	2.8473	1.4682	28.964
7600	7609	9.7832	5.3829	7005.3	1.1441	417.76	2.8290	1.4767	28.964
7650	7659	9.7831	5.3517	6995.8	1.1375	417.47	2.8107	1.4853	28.964
7700	7709	9.7829	5.3207	6986.4	1.1309	417.19	2.7925	1.4939	28.964
7750	7759	9.7827	5.2897	6977.0	1.1243	416.90	2.7744	1.5027	28.964
7800	7810	9.7826	5.2589	6967.5	1.1178	416.62	2.7564	1.5114	28.964
7850	7860	9.7824	5.2283	6958.1	1.1113	416.33	2.7385	1.5203	28.964
7900	7910	9.7823	5.1978	6948.7	1.1048	416.05	2.7207	1.5292	28.964
7950	7960	9.7821	5.1674	6939.3	1.0984	415.76	2.7030	1.5381	28.964
8000	8010	9.7820	5.1372 + 0	6929.8	1.0920 +25	415.48	2.6854 + 9	1.5472 - 7	28.964
8050	8060	9.7818	5.1071	6920.4	1.0856	415.19	2.6679	1.5563	28.964
8100	8110	9.7817	5.0771	6911.0	1.0792	414.90	2.6504	1.5654	28.964
8150	8160	9.7815	5.0473	6901.6	1.0729	414.62	2.6331	1.5746	28.964
8200	8211	9.7814	5.0176	6892.1	1.0666	414.33	2.6158	1.5839	28.964
8250	8261	9.7812	4.9880	6882.7	1.0604	414.04	2.5987	1.5933	28.964
8300	8311	9.7811	4.9586	6873.3	1.0541	413.76	2.5816	1.6027	28.964
8350	8361	9.7809	4.9293	6863.8	1.0479	413.47	2.5646	1.6122	28.964
8400	8411	9.7807	4.9001	6854.4	1.0417	413.18	2.5477	1.6218	28.964
8450	8461	9.7806	4.8711	6845.0	1.0356	412.89	2.5309	1.6314	28.964
8500	8511	9.7804	4.8422 + 0	6835.5	1.0294 +25	412.61	2.5141 + 9	1.6412 - 7	28.964
8550	8562	9.7803	4.8134	6826.1	1.0233	412.32	2.4975	1.6509	28.964
8600	8612	9.7801	4.7848	6816.7	1.0173	412.03	2.4809	1.6608	28.964
8650	8662	9.7800	4.7563	6807.2	1.0112	411.74	2.4645	1.6707	28.964
8700	8712	9.7798	4.7279	6797.8	1.0052	411.45	2.4481	1.6807	28.964
8750	8762	9.7797	4.6997	6788.4	9.9922 +24	411.16	2.4318	1.6908	28.964
8800	8812	9.7795	4.6715	6779.0	9.9325	410.88	2.4156	1.7009	28.964
8850	8862	9.7794	4.6436	6769.5	9.8732	410.59	2.3995	1.7112	28.964
8900	8912	9.7792	4.6157	6760.1	9.8141	410.30	2.3834	1.7215	28.964
8950	8963	9.7791	4.5880	6750.7	9.7553	410.01	2.3675	1.7318	28.964
9000	9013	9.7789	4.5604 + 0	6741.2	9.6968 +24	409.72	2.3516 + 9	1.7423 - 7	28.964
9050	9063	9.7787	4.5329	6731.8	9.6385	409.43	2.3358	1.7528	28.964
9100	9113	9.7786	4.5055	6722.3	9.5805	409.14	2.3201	1.7634	28.964
9150	9163	9.7784	4.4783	6712.9	9.5228	408.85	2.3045	1.7741	28.964
9200	9213	9.7783	4.4512	6703.5	9.4653	408.56	2.2890	1.7849	28.964
9250	9263	9.7781	4.4243	6694.0	9.4081	408.27	2.2735	1.7958	28.964
9300	9314	9.7780	4.3974	6684.6	9.3512	407.97	2.2581	1.8067	28.964
9350	9364	9.7778	4.3707	6675.2	9.2945	407.68	2.2428	1.8177	28.964
9400	9414	9.7777	4.3441	6665.7	9.2381	407.39	2.2276	1.8288	28.964
9450	9464	9.7775	4.3176	6656.3	9.1819	407.10	2.2125	1.8400	28.964
9500	9514	9.7774	4.2913 + 0	6646.9	9.1261 +24	406.81	2.1975 + 9	1.8513 - 7	28.964
9550	9564	9.7772	4.2651	6637.4	9.0704	406.52	2.1825	1.8626	28.964
9600	9615	9.7770	4.2390	6628.0	9.0151	406.22	2.1676	1.8740	28.964
9650	9665	9.7769	4.2130	6618.6	8.9600	405.93	2.1528	1.8856	28.964
9700	9715	9.7767	4.1871	6609.1	8.9051	405.64	2.1381	1.8972	28.964
9750	9765	9.7766	4.1614	6599.7	8.8505	405.35	2.1235	1.9089	28.964
9800	9815	9.7764	4.1358	6590.2	8.7962	405.05	2.1089	1.9207	28.964
9850	9865	9.7763	4.1103	6580.8	8.7421	404.76	2.0944	1.9326	28.964
9900	9915	9.7761	4.0849	6571.4	8.6883	404.47	2.0800	1.9445	28.964
9950	9966	9.7760	4.0597	6561.9	8.6347	404.17	2.0657	1.9566	28.964
10000	10016	9.7758	4.0345 + 0	6552.5	8.5814 +24	403.88	2.0514 + 9	1.9688 - 7	28.964
10050	10066	9.7757	4.0095	6543.0	8.5283	403.58	2.0373	1.9810	28.964
10100	10116	9.7755	3.9846	6533.6	8.4755	403.29	2.0232	1.9933	28.964
10150	10166	9.7754	3.9599	6524.2	8.4230	402.99	2.0092	2.0058	28.964
10200	10216	9.7752	3.9352	6514.7	8.3706	402.70	1.9952	2.0183	28.964
10250	10267	9.7750	3.9107	6505.3	8.3186	402.40	1.9814	2.0310	28.964
10300	10317	9.7749	3.8862	6495.8	8.2668	402.11	1.9676	2.0437	28.964
10350	10367	9.7747	3.8619	6486.4	8.2152	401.81	1.9539	2.0565	28.964
10400	10417	9.7746	3.8378	6476.9	8.1639	401.52	1.9402	2.0694	28.964
10450	10467	9.7744	3.8137	6467.5	8.1128	401.22	1.9267	2.0825	28.964
10500	10517	9.7743	3.7897 + 0	6458.1	8.0620 +24	400.93	1.9132 + 9	2.0956 - 7	28.964
10550	10568	9.7741	3.7659	6448.6	8.0114	400.63	1.8998	2.1088	28.964
10600	10618	9.7740	3.7422	6439.2	7.9610	400.33	1.8864	2.1222	28.964
10650	10668	9.7738	3.7186	6429.7	7.9109	400.04	1.8732	2.1356	28.964
10700	10718	9.7737	3.6951	6420.3	7.8611	399.74	1.8600	2.1492	28.964
10750	10768	9.7735	3.6717	6410.8	7.8115	399.44	1.8469	2.1628	28.964
10800	10818	9.7734	3.6484	6401.4	7.7621	399.14	1.8338	2.1766	28.964
10850	10869	9.7732	3.6253	6392.0	7.7129	398.85	1.8209	2.1904	28.964
10900	10919	9.7730	3.6022	6382.5	7.6640	398.55	1.8080	2.2044	28.964
10950	10969	9.7729	3.5793	6373.1	7.6154	398.25	1.7951	2.2185	28.964



TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
7000	6992	9.7851	5.7734 + 0	7119.8	1.2268 +25	421.20	3.0586 + 9	1.3771 - 7	28.964
7050	7042	9.7849	5.7405	7110.4	1.2199	420.92	3.0392	1.3850	28.964
7100	7092	9.7848	5.7078	7101.0	1.2129	420.63	3.0199	1.3929	28.964
7150	7142	9.7846	5.6753	7091.6	1.2060	420.35	3.0007	1.4008	28.964
7200	7192	9.7845	5.6428	7082.2	1.1992	420.07	2.9816	1.4089	28.964
7250	7242	9.7843	5.6106	7072.8	1.1923	419.79	2.9626	1.4170	28.964
7300	7292	9.7842	5.5784	7063.4	1.1855	419.51	2.9437	1.4251	28.964
7350	7342	9.7840	5.5464	7054.0	1.1787	419.22	2.9249	1.4333	28.964
7400	7391	9.7839	5.5146	7044.6	1.1720	418.94	2.9062	1.4415	28.964
7450	7441	9.7837	5.4829	7035.2	1.1653	418.66	2.8876	1.4499	28.964
7500	7491	9.7835	5.4513 + 0	7025.8	1.1586 +25	418.37	2.8690 + 9	1.4582 - 7	28.964
7550	7541	9.7834	5.4199	7016.4	1.1519	418.09	2.8506	1.4667	28.964
7600	7591	9.7832	5.3886	7007.0	1.1453	417.81	2.8323	1.4752	28.964
7650	7641	9.7831	5.3574	6997.6	1.1387	417.52	2.8140	1.4837	28.964
7700	7691	9.7829	5.3264	6988.2	1.1321	417.24	2.7959	1.4923	28.964
7750	7741	9.7828	5.2956	6978.8	1.1256	416.96	2.7778	1.5010	28.964
7800	7790	9.7826	5.2648	6969.3	1.1190	416.67	2.7599	1.5097	28.964
7850	7840	9.7825	5.2342	6959.9	1.1126	416.39	2.7420	1.5185	28.964
7900	7890	9.7823	5.2038	6950.5	1.1061	416.10	2.7242	1.5274	28.964
7950	7940	9.7822	5.1734	6941.1	1.0997	415.82	2.7065	1.5363	28.964
8000	7990	9.7820	5.1432 + 0	6931.7	1.0933 +25	415.53	2.6889 + 9	1.5453 - 7	28.964
8050	8040	9.7819	5.1132	6922.3	1.0869	415.25	2.6714	1.5544	28.964
8100	8090	9.7817	5.0833	6912.9	1.0806	414.96	2.6540	1.5635	28.964
8150	8140	9.7815	5.0535	6903.5	1.0742	414.68	2.6367	1.5727	28.964
8200	8189	9.7814	5.0238	6894.1	1.0680	414.39	2.6195	1.5820	28.964
8250	8239	9.7812	4.9943	6884.7	1.0617	414.10	2.6023	1.5913	28.964
8300	8289	9.7811	4.9649	6875.3	1.0555	413.82	2.5853	1.6007	28.964
8350	8339	9.7809	4.9357	6865.9	1.0493	413.53	2.5683	1.6101	28.964
8400	8389	9.7808	4.9066	6856.5	1.0431	413.25	2.5514	1.6197	28.964
8450	8439	9.7806	4.8776	6847.1	1.0369	412.96	2.5346	1.6293	28.964
8500	8489	9.7805	4.8487 + 0	6837.7	1.0308 +25	412.67	2.5179 + 9	1.6389 - 7	28.964
8550	8539	9.7803	4.8200	6828.3	1.0247	412.38	2.5013	1.6487	28.964
8600	8588	9.7802	4.7914	6818.9	1.0187	412.10	2.4848	1.6585	28.964
8650	8638	9.7800	4.7630	6809.5	1.0126	411.81	2.4683	1.6684	28.964
8700	8688	9.7799	4.7346	6800.1	1.0066	411.52	2.4520	1.6783	28.964
8750	8738	9.7797	4.7064	6790.7	1.0007	411.23	2.4357	1.6884	28.964
8800	8788	9.7796	4.6784	6781.2	9.9470 +24	410.95	2.4195	1.6985	28.964
8850	8838	9.7794	4.6504	6771.8	9.8878	410.66	2.4034	1.7086	28.964
8900	8888	9.7792	4.6226	6762.4	9.8288	410.37	2.3874	1.7189	28.964
8950	8937	9.7791	4.5949	6753.0	9.7701	410.08	2.3715	1.7292	28.964
9000	8987	9.7789	4.5674 + 0	6743.6	9.7116 +24	409.79	2.3556 + 9	1.7396 - 7	28.964
9050	9037	9.7788	4.5399	6734.2	9.6535	409.50	2.3399	1.7501	28.964
9100	9087	9.7786	4.5126	6724.8	9.5956	409.21	2.3242	1.7607	28.964
9150	9137	9.7785	4.4855	6715.4	9.5379	408.92	2.3086	1.7713	28.964
9200	9187	9.7783	4.4584	6706.0	9.4806	408.63	2.2931	1.7820	28.964
9250	9237	9.7782	4.4315	6696.6	9.4235	408.34	2.2776	1.7928	28.964
9300	9286	9.7780	4.4047	6687.2	9.3666	408.05	2.2623	1.8037	28.964
9350	9336	9.7779	4.3780	6677.8	9.3100	407.76	2.2470	1.8147	28.964
9400	9386	9.7777	4.3515	6668.4	9.2537	407.47	2.2318	1.8257	28.964
9450	9436	9.7776	4.3250	6658.9	9.1977	407.18	2.2167	1.8368	28.964
9500	9486	9.7774	4.2987 + 0	6649.5	9.1419 +24	406.89	2.2017 + 9	1.8481 - 7	28.964
9550	9536	9.7772	4.2726	6640.1	9.0863	406.60	2.1868	1.8593	28.964
9600	9586	9.7771	4.2465	6630.7	9.0311	406.31	2.1719	1.8707	28.964
9650	9635	9.7769	4.2206	6621.3	8.9761	406.02	2.1571	1.8822	28.964
9700	9685	9.7768	4.1948	6611.9	8.9213	405.72	2.1424	1.8937	28.964
9750	9735	9.7766	4.1691	6602.5	8.8668	405.43	2.1278	1.9054	28.964
9800	9785	9.7765	4.1435	6593.1	8.8126	405.14	2.1133	1.9171	28.964
9850	9835	9.7763	4.1180	6583.7	8.7586	404.85	2.0988	1.9289	28.964
9900	9885	9.7762	4.0927	6574.3	8.7048	404.56	2.0844	1.9408	28.964
9950	9934	9.7760	4.0675	6564.9	8.6514	404.26	2.0701	1.9528	28.964
10000	9984	9.7759	4.0424 + 0	6555.4	8.5981 +24	403.97	2.0559 + 9	1.9649 - 7	28.964
10050	10034	9.7757	4.0175	6546.0	8.5451	403.68	2.0418	1.9771	28.964
10100	10084	9.7756	3.9926	6536.6	8.4924	403.38	2.0277	1.9894	28.964
10150	10134	9.7754	3.9679	6527.2	8.4399	403.09	2.0137	2.0018	28.964
10200	10184	9.7753	3.9433	6517.8	8.3877	402.80	1.9998	2.0142	28.964
10250	10233	9.7751	3.9188	6508.4	8.3357	402.50	1.9859	2.0268	28.964
10300	10283	9.7749	3.8944	6499.0	8.2840	402.21	1.9722	2.0394	28.964
10350	10333	9.7748	3.8701	6489.6	8.2325	401.91	1.9585	2.0522	28.964
10400	10383	9.7746	3.8460	6480.2	8.1813	401.62	1.9448	2.0650	28.964
10450	10433	9.7745	3.8219	6470.7	8.1303	401.32	1.9313	2.0780	28.964
10500	10483	9.7743	3.7980 + 0	6461.3	8.0795 +24	401.03	1.9178 + 9	2.0910 - 7	28.964
10550	10533	9.7742	3.7742	6451.9	8.0290	400.73	1.9044	2.1042	28.964
10600	10582	9.7740	3.7505	6442.5	7.9788	400.44	1.8911	2.1174	28.964
10650	10632	9.7739	3.7270	6433.1	7.9288	400.14	1.8779	2.1308	28.964
10700	10682	9.7737	3.7035	6423.7	7.8790	399.85	1.8647	2.1443	28.964
10750	10732	9.7736	3.6802	6414.3	7.8294	399.55	1.8516	2.1578	28.964
10800	10782	9.7734	3.6569	6404.9	7.7801	399.25	1.8386	2.1715	28.964
10850	10832	9.7733	3.6338	6395.4	7.7311	398.96	1.8256	2.1853	28.964
10900	10881	9.7731	3.6108	6386.0	7.6823	398.66	1.8128	2.1992	28.964
10950	10931	9.7729	3.5879	6376.6	7.6337	398.36	1.8000	2.2132	28.964

## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, m \text{ sec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{ sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
$H, \text{m}$	$Z, \text{m}$								
11000	11019	9.7727	3.5565 + 0	6363.6	7.5669 +24	397.95	1.7824 + 9	2.2327 - 7	28.964
11100	11119	9.7724	3.5007	6363.8	7.4486	397.95	1.7545	2.2682	28.964
11200	11220	9.7721	3.4458	6364.0	7.3320	397.95	1.7270	2.3042	28.964
11300	11320	9.7718	3.3918	6364.2	7.2173	397.95	1.7000	2.3409	28.964
11400	11420	9.7715	3.3387	6364.4	7.1044	397.95	1.6734	2.3781	28.964
11500	11521	9.7712	3.2863	6364.6	6.9932	397.95	1.6472	2.4159	28.964
11600	11621	9.7709	3.2348	6364.8	6.8838	397.95	1.6215	2.4543	28.964
11700	11722	9.7706	3.1841	6365.0	6.7761	397.95	1.5961	2.4933	28.964
11800	11822	9.7703	3.1342	6365.2	6.6701	397.95	1.5711	2.5329	28.964
11900	11922	9.7700	3.0850	6365.4	6.5658	397.95	1.5466	2.5731	28.964
12000	12023	9.7697	3.0367 + 0	6365.6	6.4630 +24	397.95	1.5224 + 9	2.6140 - 7	28.964
12100	12123	9.7693	2.9891	6365.8	6.3619	397.95	1.4985	2.6556	28.964
12200	12223	9.7690	2.9422	6366.0	6.2624	397.95	1.4751	2.6978	28.964
12300	12324	9.7687	2.8961	6366.2	6.1644	397.95	1.4520	2.7407	28.964
12400	12424	9.7684	2.8507	6366.4	6.0680	397.95	1.4293	2.7842	28.964
12500	12525	9.7681	2.8060	6366.6	5.9730	397.95	1.4069	2.8285	28.964
12600	12625	9.7678	2.7620	6366.8	5.8796	397.95	1.3849	2.8734	28.964
12700	12725	9.7675	2.7187	6367.0	5.7876	397.95	1.3633	2.9191	28.964
12800	12826	9.7672	2.6761	6367.2	5.6971	397.95	1.3419	2.9655	28.964
12900	12926	9.7669	2.6342	6367.4	5.6079	397.95	1.3209	3.0126	28.964
13000	13027	9.7666	2.5929 + 0	6367.6	5.5202 +24	397.95	1.3003 + 9	3.0605 - 7	28.964
13100	13127	9.7663	2.5522	6367.8	5.4338	397.95	1.2799	3.1092	28.964
13200	13227	9.7660	2.5122	6368.0	5.3488	397.95	1.2599	3.1586	28.964
13300	13328	9.7657	2.4728	6368.2	5.2651	397.95	1.2402	3.2088	28.964
13400	13428	9.7653	2.4341	6368.4	5.1828	397.95	1.2208	3.2598	28.964
13500	13529	9.7650	2.3959	6368.6	5.1017	397.95	1.2017	3.3116	28.964
13600	13629	9.7647	2.3583	6368.8	5.0218	397.95	1.1829	3.3642	28.964
13700	13730	9.7644	2.3214	6369.0	4.9433	397.95	1.1644	3.4177	28.964
13800	13830	9.7641	2.2850	6369.2	4.8659	397.95	1.1462	3.4720	28.964
13900	13930	9.7638	2.2492	6369.4	4.7898	397.95	1.1282	3.5272	28.964
14000	14031	9.7635	2.2139 + 0	6369.6	4.7149 +24	397.95	1.1106 + 9	3.5833 - 7	28.964
14100	14131	9.7632	2.1792	6369.8	4.6411	397.95	1.0932	3.6402	28.964
14200	14232	9.7629	2.1450	6370.0	4.5685	397.95	1.0761	3.6981	28.964
14300	14332	9.7626	2.1114	6370.2	4.4970	397.95	1.0593	3.7569	28.964
14400	14433	9.7623	2.0783	6370.4	4.4267	397.95	1.0427	3.8166	28.964
14500	14533	9.7620	2.0457	6370.6	4.3574	397.95	1.0264	3.8772	28.964
14600	14634	9.7616	2.0137	6370.8	4.2892	397.95	1.0103	3.9388	28.964
14700	14734	9.7613	1.9821	6371.0	4.2221	397.95	9.9452 + 8	4.0014	28.964
14800	14835	9.7610	1.9510	6371.3	4.1561	397.95	9.7896	4.0650	28.964
14900	14935	9.7607	1.9204	6371.5	4.0911	397.95	9.6364	4.1297	28.964
15000	15035	9.7604	1.8903 + 0	6371.7	4.0271 +24	397.95	9.4857 + 8	4.1951 - 7	28.964
15100	15136	9.7601	1.8607	6371.9	3.9640	397.95	9.3373	4.2620	28.964
15200	15236	9.7598	1.8315	6372.1	3.9020	397.95	9.1912	4.3297	28.964
15300	15337	9.7595	1.8028	6372.3	3.8410	397.95	9.0474	4.3985	28.964
15400	15437	9.7592	1.7746	6372.5	3.7809	397.95	8.9058	4.4684	28.964
15500	15538	9.7589	1.7467	6372.7	3.7217	397.95	8.7665	4.5395	28.964
15600	15638	9.7586	1.7194	6372.9	3.6635	397.95	8.6293	4.6116	28.964
15700	15739	9.7583	1.6924	6373.1	3.6062	397.95	8.4943	4.6849	28.964
15800	15839	9.7580	1.6659	6373.3	3.5498	397.95	8.3614	4.7594	28.964
15900	15940	9.7576	1.6398	6373.5	3.4942	397.95	8.2306	4.8350	28.964
16000	16040	9.7573	1.6141 + 0	6373.7	3.4396 +24	397.95	8.1019 + 8	4.9119 - 7	28.964
16100	16141	9.7570	1.5888	6373.9	3.3858	397.95	7.9751	4.9899	28.964
16200	16241	9.7567	1.5638	6374.1	3.3328	397.95	7.8503	5.0692	28.964
16300	16342	9.7564	1.5393	6374.3	3.2806	397.95	7.7275	5.1498	28.964
16400	16442	9.7561	1.5152	6374.5	3.2293	397.95	7.6066	5.2317	28.964
16500	16543	9.7558	1.4914	6374.7	3.1788	397.95	7.4876	5.3148	28.964
16600	16643	9.7555	1.4681	6374.9	3.1291	397.95	7.3705	5.3993	28.964
16700	16744	9.7552	1.4451	6375.1	3.0801	397.95	7.2552	5.4851	28.964
16800	16845	9.7549	1.4224	6375.3	3.0319	397.95	7.1416	5.5723	28.964
16900	16945	9.7546	1.4001	6375.5	2.9845	397.95	7.0299	5.6608	28.964
17000	17046	9.7543	1.3782 + 0	6375.7	2.9378 +24	397.95	6.9199 + 8	5.7508 - 7	28.964
17100	17146	9.7540	1.3565	6375.9	2.8918	397.95	6.8117	5.8422	28.964
17200	17247	9.7536	1.3353	6376.1	2.8466	397.95	6.7051	5.9351	28.964
17300	17347	9.7533	1.3144	6376.3	2.8020	397.95	6.6002	6.0294	28.964
17400	17448	9.7530	1.2937	6376.5	2.7582	397.95	6.4969	6.1252	28.964
17500	17548	9.7527	1.2735	6376.7	2.7151	397.95	6.3953	6.2226	28.964
17600	17649	9.7524	1.2535	6376.9	2.6726	397.95	6.2952	6.3215	28.964
17700	17749	9.7521	1.2339	6377.1	2.6308	397.95	6.1967	6.4220	28.964
17800	17850	9.7518	1.2145	6377.3	2.5896	397.95	6.0998	6.5240	28.964
17900	17951	9.7515	1.1955	6377.5	2.5491	397.95	6.0044	6.6277	28.964
18000	18051	9.7512	1.1767 + 0	6377.7	2.5092 +24	397.95	5.9104 + 8	6.7331 - 7	28.964
18100	18152	9.7509	1.1583	6377.9	2.4700	397.95	5.8179	6.8401	28.964
18200	18252	9.7506	1.1401	6378.1	2.4313	397.95	5.7269	6.9488	28.964
18300	18353	9.7503	1.1223	6378.3	2.3933	397.95	5.6373	7.0592	28.964
18400	18453	9.7500	1.1047	6378.5	2.3558	397.95	5.5491	7.1714	28.964
18500	18554	9.7496	1.0873	6378.7	2.3190	397.95	5.4623	7.2854	28.964
18600	18655	9.7493	1.0703	6378.9	2.2827	397.95	5.3769	7.4012	28.964
18700	18755	9.7490	1.0535	6379.1	2.2470	397.95	5.2927	7.5188	28.964
18800	18856	9.7487	1.0370	6379.3	2.2118	397.95	5.2099	7.6383	28.964
18900	18956	9.7484	1.0207	6379.5	2.1772	397.95	5.1284	7.7597	28.964

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
11000	10981	9.7728	3.5651 + 0	6367.2	7.5853 +24	398.07	1.7872 + 9	2.2273 - 7	28.964
11100	11081	9.7725	3.5114	6363.8	7.4713	397.95	1.7599	2.2613	28.964
11200	11180	9.7722	3.4566	6364.0	7.3548	397.95	1.7324	2.2971	28.964
11300	11280	9.7719	3.4026	6364.2	7.2402	397.95	1.7054	2.3335	28.964
11400	11380	9.7716	3.3494	6364.4	7.1273	397.95	1.6788	2.3704	28.964
11500	11479	9.7713	3.2971	6364.6	7.0162	397.95	1.6527	2.4080	28.964
11600	11579	9.7710	3.2456	6364.8	6.9068	397.95	1.6269	2.4461	28.964
11700	11679	9.7706	3.1949	6365.0	6.7991	397.95	1.6015	2.4848	28.964
11800	11778	9.7703	3.1450	6365.2	6.6932	397.95	1.5766	2.5242	28.964
11900	11878	9.7700	3.0959	6365.4	6.5888	397.95	1.5520	2.5641	28.964
12000	11977	9.7697	3.0475 + 0	6365.6	6.4861 +24	397.95	1.5278 + 9	2.6047 - 7	28.964
12100	12077	9.7694	3.0000	6365.8	6.3850	397.95	1.5040	2.6460	28.964
12200	12177	9.7691	2.9531	6366.0	6.2855	397.95	1.4805	2.6879	28.964
12300	12276	9.7688	2.9070	6366.2	6.1876	397.95	1.4575	2.7304	28.964
12400	12376	9.7685	2.8616	6366.4	6.0911	397.95	1.4348	2.7737	28.964
12500	12475	9.7682	2.8169	6366.6	5.9962	397.95	1.4124	2.8176	28.964
12600	12575	9.7679	2.7729	6366.8	5.9027	397.95	1.3904	2.8622	28.964
12700	12675	9.7676	2.7296	6367.0	5.8108	397.95	1.3687	2.9075	28.964
12800	12774	9.7673	2.6870	6367.2	5.7202	397.95	1.3474	2.9535	28.964
12900	12874	9.7670	2.6450	6367.4	5.6311	397.95	1.3264	3.0003	28.964
13000	12973	9.7667	2.6038 + 0	6367.6	5.5433 +24	397.95	1.3057 + 9	3.0477 - 7	28.964
13100	13073	9.7664	2.5631	6367.8	5.4570	397.95	1.2854	3.0960	28.964
13200	13173	9.7660	2.5231	6368.0	5.3719	397.95	1.2654	3.1450	28.964
13300	13272	9.7657	2.4837	6368.2	5.2882	397.95	1.2456	3.1948	28.964
13400	13372	9.7654	2.4449	6368.4	5.2058	397.95	1.2262	3.2453	28.964
13500	13471	9.7651	2.4068	6368.6	5.1247	397.95	1.2071	3.2967	28.964
13600	13571	9.7648	2.3692	6368.8	5.0449	397.95	1.1883	3.3489	28.964
13700	13671	9.7645	2.3322	6369.0	4.9663	397.95	1.1698	3.4019	28.964
13800	13770	9.7642	2.2958	6369.2	4.8889	397.95	1.1516	3.4557	28.964
13900	13870	9.7639	2.2600	6369.4	4.8128	397.95	1.1336	3.5104	28.964
14000	13969	9.7636	2.2247 + 0	6369.6	4.7378 +24	397.95	1.1160 + 9	3.5659 - 7	28.964
14100	14069	9.7633	2.1900	6369.8	4.6640	397.95	1.0986	3.6223	28.964
14200	14168	9.7630	2.1558	6370.0	4.5914	397.95	1.0815	3.6797	28.964
14300	14268	9.7627	2.1221	6370.2	4.5198	397.95	1.0646	3.7379	28.964
14400	14367	9.7624	2.0890	6370.4	4.4494	397.95	1.0481	3.7970	28.964
14500	14467	9.7621	2.0564	6370.6	4.3801	397.95	1.0317	3.8571	28.964
14600	14567	9.7618	2.0243	6370.8	4.3119	397.95	1.0157	3.9181	28.964
14700	14666	9.7614	1.9927	6371.0	4.2448	397.95	9.9985 + 8	3.9801	28.964
14800	14766	9.7611	1.9616	6371.2	4.1787	397.95	9.8428	4.0431	28.964
14900	14865	9.7608	1.9310	6371.4	4.1136	397.95	9.6895	4.1070	28.964
15000	14965	9.7605	1.9009 + 0	6371.6	4.0495 +24	397.95	9.5386 + 8	4.1720 - 7	28.964
15100	15064	9.7602	1.8713	6371.8	3.9865	397.95	9.3901	4.2380	28.964
15200	15164	9.7599	1.8421	6372.0	3.9244	397.95	9.2439	4.3050	28.964
15300	15263	9.7596	1.8133	6372.2	3.8633	397.95	9.1000	4.3731	28.964
15400	15363	9.7593	1.7850	6372.4	3.8031	397.95	8.9583	4.4423	28.964
15500	15462	9.7590	1.7572	6372.6	3.7439	397.95	8.8188	4.5125	28.964
15600	15562	9.7587	1.7298	6372.8	3.6856	397.95	8.6815	4.5839	28.964
15700	15661	9.7584	1.7028	6373.0	3.6283	397.95	8.5463	4.6564	28.964
15800	15761	9.7581	1.6762	6373.2	3.5718	397.95	8.4133	4.7301	28.964
15900	15860	9.7578	1.6501	6373.4	3.5162	397.95	8.2823	4.8049	28.964
16000	15960	9.7575	1.6243 + 0	6373.6	3.4614 +24	397.95	8.1533 + 8	4.8808 - 7	28.964
16100	16059	9.7572	1.5990	6373.8	3.4075	397.95	8.0264	4.9580	28.964
16200	16159	9.7569	1.5741	6374.0	3.3545	397.95	7.9015	5.0364	28.964
16300	16258	9.7565	1.5495	6374.2	3.3023	397.95	7.7785	5.1161	28.964
16400	16358	9.7562	1.5253	6374.4	3.2509	397.95	7.6574	5.1969	28.964
16500	16457	9.7559	1.5015	6374.6	3.2003	397.95	7.5382	5.2791	28.964
16600	16557	9.7556	1.4781	6374.8	3.1505	397.95	7.4209	5.3626	28.964
16700	16656	9.7553	1.4551	6375.0	3.1014	397.95	7.3054	5.4474	28.964
16800	16756	9.7550	1.4324	6375.2	3.0532	397.95	7.1917	5.5335	28.964
16900	16855	9.7547	1.4101	6375.4	3.0056	397.95	7.0798	5.6210	28.964
17000	16955	9.7544	1.3881 + 0	6375.6	2.9589 +24	397.95	6.9696 + 8	5.7098 - 7	28.964
17100	17054	9.7541	1.3664	6375.8	2.9128	397.95	6.8611	5.8001	28.964
17200	17154	9.7538	1.3451	6376.0	2.8675	397.95	6.7544	5.8918	28.964
17300	17253	9.7535	1.3241	6376.2	2.8229	397.95	6.6492	5.9849	28.964
17400	17352	9.7532	1.3035	6376.4	2.7789	397.95	6.5458	6.0795	28.964
17500	17452	9.7529	1.2832	6376.6	2.7357	397.95	6.4439	6.1756	28.964
17600	17551	9.7526	1.2632	6376.8	2.6931	397.95	6.3437	6.2732	28.964
17700	17651	9.7523	1.2435	6377.0	2.6512	397.95	6.2450	6.3724	28.964
17800	17750	9.7520	1.2241	6377.2	2.6100	397.95	6.1478	6.4731	28.964
17900	17850	9.7516	1.2050	6377.4	2.5694	397.95	6.0521	6.5754	28.964
18000	17949	9.7513	1.1862 + 0	6377.6	2.5294 +24	397.95	5.9580 + 8	6.6793 - 7	28.964
18100	18049	9.7510	1.1677	6377.8	2.4901	397.95	5.8653	6.7849	28.964
18200	18148	9.7507	1.1495	6378.0	2.4513	397.95	5.7740	6.8921	28.964
18300	18247	9.7504	1.1316	6378.2	2.4132	397.95	5.6842	7.0010	28.964
18400	18347	9.7501	1.1140	6378.4	2.3756	397.95	5.5958	7.1116	28.964
18500	18446	9.7498	1.0966	6378.6	2.3387	397.95	5.5088	7.2240	28.964
18600	18546	9.7495	1.0795	6378.8	2.3023	397.95	5.4231	7.3381	28.964
18700	18645	9.7492	1.0627	6379.0	2.2665	397.95	5.3387	7.4541	28.964
18800	18745	9.7489	1.0461	6379.2	2.2312	397.95	5.2557	7.5718	28.964
18900	18844	9.7486	1.0298	6379.4	2.1965	397.95	5.1739	7.6915	28.964



## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
$H, \text{m}$	$Z, \text{m}$								
19000	19057	9.7481	1.0047 + 0	6379.7	2.1432 +24	397.95	5.0482 + 8	7.8831 - 7	28.964
19100	19158	9.7478	9.8900 - 1	6379.9	2.1096	397.95	4.9692	8.0084	28.964
19200	19258	9.7475	9.7349	6380.1	2.0766	397.95	4.8915	8.1356	28.964
19300	19359	9.7472	9.5823	6380.3	2.0441	397.95	4.8149	8.2650	28.964
19400	19459	9.7469	9.4321	6380.5	2.0122	397.95	4.7396	8.3963	28.964
19500	19560	9.7466	9.2842	6380.7	1.9807	397.95	4.6654	8.5298	28.964
19600	19661	9.7463	9.1387	6380.9	1.9497	397.95	4.5925	8.6653	28.964
19700	19761	9.7460	8.9954	6381.1	1.9192	397.95	4.5206	8.8031	28.964
19800	19862	9.7456	8.8544	6381.3	1.8892	397.95	4.4499	8.9430	28.964
19900	19963	9.7453	8.7156	6381.5	1.8596	397.95	4.3803	9.0851	28.964
20000	20063	9.7450	8.5790 - 1	6381.7	1.8305 +24	397.95	4.3117 + 8	9.2295 - 7	28.964
20100	20164	9.7447	8.4406	6384.9	1.8010	398.04	4.2433	9.3805	28.964
20200	20264	9.7444	8.3046	6388.0	1.7721	398.14	4.1760	9.5339	28.964
20300	20365	9.7441	8.1708	6391.2	1.7436	398.23	4.1098	9.6897	28.964
20400	20466	9.7438	8.0392	6394.3	1.7155	398.32	4.0447	9.8480	28.964
20500	20566	9.7435	7.9098	6397.5	1.6880	398.41	3.9806	1.0009 - 6	28.964
20600	20667	9.7432	7.7825	6400.6	1.6609	398.50	3.9176	1.0172	28.964
20700	20768	9.7429	7.6574	6403.7	1.6342	398.59	3.8556	1.0338	28.964
20800	20868	9.7426	7.5343	6406.9	1.6080	398.69	3.7946	1.0507	28.964
20900	20969	9.7423	7.4132	6410.0	1.5822	398.78	3.7346	1.0678	28.964
21000	21070	9.7420	7.2941 - 1	6413.2	1.5568 +24	398.87	3.6756 + 8	1.0852 - 6	28.964
21100	21170	9.7416	7.1770	6416.3	1.5319	398.96	3.6175	1.1029	28.964
21200	21271	9.7413	7.0619	6419.5	1.5074	399.05	3.5604	1.1208	28.964
21300	21372	9.7410	6.9486	6422.6	1.4832	399.14	3.5042	1.1390	28.964
21400	21472	9.7407	6.8372	6425.8	1.4595	399.24	3.4489	1.1576	28.964
21500	21573	9.7404	6.7277	6428.9	1.4362	399.33	3.3946	1.1764	28.964
21600	21674	9.7401	6.6199	6432.1	1.4132	399.42	3.3411	1.1955	28.964
21700	21774	9.7398	6.5139	6435.2	1.3906	399.51	3.2884	1.2149	28.964
21800	21875	9.7395	6.4097	6438.4	1.3684	399.60	3.2366	1.2346	28.964
21900	21976	9.7392	6.3072	6441.5	1.3466	399.69	3.1857	1.2546	28.964
22000	22076	9.7389	6.2063 - 1	6444.7	1.3251 +24	399.78	3.1356 + 8	1.2750 - 6	28.964
22100	22177	9.7386	6.1071	6447.8	1.3039	399.88	3.0863	1.2957	28.964
22200	22278	9.7383	6.0096	6451.0	1.2832	399.97	3.0378	1.3166	28.964
22300	22379	9.7380	5.9136	6454.1	1.2627	400.06	2.9900	1.3380	28.964
22400	22479	9.7376	5.8192	6457.3	1.2426	400.15	2.9431	1.3596	28.964
22500	22580	9.7373	5.7264	6460.5	1.2228	400.24	2.8969	1.3816	28.964
22600	22681	9.7370	5.6351	6463.6	1.2034	400.33	2.8514	1.4040	28.964
22700	22781	9.7367	5.5453	6466.8	1.1842	400.42	2.8067	1.4267	28.964
22800	22882	9.7364	5.4570	6469.9	1.1654	400.51	2.7627	1.4497	28.964
22900	22983	9.7361	5.3701	6473.1	1.1469	400.61	2.7194	1.4731	28.964
23000	23084	9.7358	5.2846 - 1	6476.2	1.1286 +24	400.70	2.6769 + 8	1.4969 - 6	28.964
23100	23184	9.7355	5.2005	6479.4	1.1107	400.79	2.6350	1.5210	28.964
23200	23285	9.7352	5.1178	6482.5	1.0931	400.88	2.5937	1.5456	28.964
23300	23386	9.7349	5.0365	6485.7	1.0758	400.97	2.5532	1.5705	28.964
23400	23486	9.7346	4.9565	6488.8	1.0587	401.06	2.5132	1.5958	28.964
23500	23587	9.7343	4.8778	6492.0	1.0419	401.15	2.4740	1.6215	28.964
23600	23688	9.7340	4.8003	6495.1	1.0254	401.24	2.4353	1.6476	28.964
23700	23789	9.7337	4.7242	6498.3	1.0092	401.34	2.3973	1.6741	28.964
23800	23889	9.7333	4.6493	6501.4	9.9320 +23	401.43	2.3599	1.7010	28.964
23900	23990	9.7330	4.5756	6504.6	9.7749	401.52	2.3231	1.7284	28.964
24000	24091	9.7327	4.5031 - 1	6507.8	9.6203 +23	401.61	2.2869 + 8	1.7561 - 6	28.964
24100	24192	9.7324	4.4317	6510.9	9.4683	401.70	2.2512	1.7843	28.964
24200	24292	9.7321	4.3616	6514.1	9.3187	401.79	2.2162	1.8130	28.964
24300	24393	9.7318	4.2926	6517.2	9.1715	401.88	2.1817	1.8421	28.964
24400	24494	9.7315	4.2247	6520.4	9.0268	401.97	2.1477	1.8716	28.964
24500	24595	9.7312	4.1579	6523.5	8.8843	402.06	2.1143	1.9016	28.964
24600	24696	9.7309	4.0922	6526.7	8.7442	402.15	2.0814	1.9321	28.964
24700	24796	9.7306	4.0276	6529.8	8.6064	402.25	2.0491	1.9630	28.964
24800	24897	9.7303	3.9640	6533.0	8.4708	402.34	2.0173	1.9945	28.964
24900	24998	9.7300	3.9014	6536.2	8.3374	402.43	1.9859	2.0264	28.964
25000	25099	9.7297	3.8399 - 1	6539.3	8.2061 +23	402.52	1.9551 + 8	2.0588 - 6	28.964
25100	25200	9.7293	3.7793	6542.5	8.0770	402.61	1.9248	2.0917	28.964
25200	25300	9.7290	3.7198	6545.6	7.9499	402.70	1.8949	2.1251	28.964
25300	25401	9.7287	3.6612	6548.8	7.8249	402.79	1.8656	2.1591	28.964
25400	25502	9.7284	3.6035	6551.9	7.7020	402.88	1.8367	2.1935	28.964
25500	25603	9.7281	3.5468	6555.1	7.5810	402.97	1.8082	2.2286	28.964
25600	25704	9.7278	3.4910	6558.3	7.4620	403.06	1.7802	2.2641	28.964
25700	25804	9.7275	3.4361	6561.4	7.3449	403.15	1.7527	2.3002	28.964
25800	25905	9.7272	3.3821	6564.6	7.2297	403.24	1.7256	2.3369	28.964
25900	26006	9.7269	3.3290	6567.7	7.1163	403.33	1.6989	2.3741	28.964
26000	26107	9.7266	3.2767 - 1	6570.9	7.0048 +23	403.42	1.6727 + 8	2.4119 - 6	28.964
26100	26208	9.7263	3.2253	6574.0	6.8950	403.52	1.6468	2.4503	28.964
26200	26308	9.7260	3.1747	6577.2	6.7871	403.61	1.6214	2.4892	28.964
26300	26409	9.7257	3.1249	6580.4	6.6808	403.70	1.5964	2.5288	28.964
26400	26510	9.7254	3.0759	6583.5	6.5763	403.79	1.5718	2.5690	28.964
26500	26611	9.7250	3.0277	6586.7	6.4735	403.88	1.5475	2.6098	28.964
26600	26712	9.7247	2.9803	6589.8	6.3723	403.97	1.5237	2.6513	28.964
26700	26813	9.7244	2.9336	6593.0	6.2727	404.06	1.5002	2.6933	28.964
26800	26913	9.7241	2.8877	6596.2	6.1748	404.15	1.4771	2.7361	28.964
26900	27014	9.7238	2.8426	6599.3	6.0784	404.24	1.4544	2.7795	28.964

TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
19000	18943	9.7483	1.0138 + 0	6379.6	2.1624 +24	397.95	5.0935 + 8	7.8130 - 7	28.964
19100	19043	9.7480	9.9798 - 1	6379.8	2.1287	397.95	5.0142	7.9364	28.964
19200	19142	9.7477	9.8243	6380.0	2.0956	397.95	4.9363	8.0618	28.964
19300	19242	9.7474	9.6712	6380.2	2.0631	397.95	4.8595	8.1892	28.964
19400	19341	9.7471	9.5205	6380.4	2.0310	397.95	4.7839	8.3185	28.964
19500	19440	9.7468	9.3722	6380.6	1.9994	397.95	4.7095	8.4499	28.964
19600	19540	9.7464	9.2261	6380.8	1.9683	397.95	4.6363	8.5834	28.964
19700	19639	9.7461	9.0824	6381.0	1.9377	397.95	4.5642	8.7190	28.964
19800	19739	9.7458	8.9409	6381.2	1.9076	397.95	4.4932	8.8567	28.964
19900	19838	9.7455	8.8016	6381.4	1.8779	397.95	4.4234	8.9966	28.964
20000	19937	9.7452	8.6645 - 1	6381.6	1.8487 +24	397.95	4.3546 + 8	9.1387 - 7	28.964
20100	20037	9.7449	8.5280	6382.9	1.8197	397.99	4.2865	9.2845	28.964
20200	20136	9.7446	8.3914	6386.0	1.7906	398.08	4.2189	9.4354	28.964
20300	20235	9.7443	8.2570	6389.1	1.7619	398.17	4.1525	9.5887	28.964
20400	20335	9.7440	8.1248	6392.2	1.7338	398.26	4.0871	9.7444	28.964
20500	20434	9.7437	7.9948	6395.4	1.7061	398.35	4.0227	9.9025	28.964
20600	20533	9.7434	7.8670	6398.5	1.6789	398.44	3.9594	1.0063 - 6	28.964
20700	20633	9.7431	7.7412	6401.6	1.6521	398.53	3.8971	1.0226	28.964
20800	20732	9.7428	7.6176	6404.8	1.6257	398.62	3.8359	1.0392	28.964
20900	20832	9.7425	7.4959	6407.9	1.5998	398.71	3.7756	1.0560	28.964
21000	20931	9.7422	7.3763 - 1	6411.0	1.5743 +24	398.81	3.7163 + 8	1.0731 - 6	28.964
21100	21030	9.7419	7.2586	6414.1	1.5493	398.90	3.6580	1.0905	28.964
21200	21130	9.7416	7.1428	6417.3	1.5246	398.99	3.6006	1.1081	28.964
21300	21229	9.7413	7.0290	6420.4	1.5004	399.08	3.5441	1.1260	28.964
21400	21328	9.7409	6.9170	6423.5	1.4765	399.17	3.4885	1.1442	28.964
21500	21428	9.7406	6.8069	6426.7	1.4530	399.26	3.4339	1.1627	28.964
21600	21527	9.7403	6.6986	6429.8	1.4300	399.35	3.3801	1.1815	28.964
21700	21626	9.7400	6.5920	6432.9	1.4073	399.44	3.3272	1.2005	28.964
21800	21725	9.7397	6.4872	6436.0	1.3849	399.53	3.2751	1.2199	28.964
21900	21825	9.7394	6.3841	6439.2	1.3630	399.62	3.2239	1.2396	28.964
22000	21924	9.7391	6.2827 - 1	6442.3	1.3414 +24	399.71	3.1735 + 8	1.2595 - 6	28.964
22100	22023	9.7388	6.1829	6445.4	1.3201	399.81	3.1240	1.2798	28.964
22200	22123	9.7385	6.0848	6448.6	1.2992	399.90	3.0752	1.3004	28.964
22300	22222	9.7382	5.9883	6451.7	1.2786	399.99	3.0272	1.3213	28.964
22400	22321	9.7379	5.8934	6454.8	1.2584	400.08	2.9800	1.3426	28.964
22500	22421	9.7376	5.8000	6457.9	1.2385	400.17	2.9335	1.3641	28.964
22600	22520	9.7373	5.7081	6461.1	1.2189	400.26	2.8878	1.3860	28.964
22700	22619	9.7370	5.6177	6464.2	1.1997	400.35	2.8428	1.4083	28.964
22800	22719	9.7367	5.5288	6467.3	1.1807	400.44	2.7985	1.4309	28.964
22900	22818	9.7364	5.4414	6470.5	1.1621	400.53	2.7550	1.4538	28.964
23000	22917	9.7361	5.3554 - 1	6473.6	1.1437 +24	400.62	2.7121 + 8	1.4772 - 6	28.964
23100	23016	9.7358	5.2708	6476.7	1.1257	400.71	2.6700	1.5008	28.964
23200	23116	9.7354	5.1875	6479.9	1.1080	400.80	2.6285	1.5249	28.964
23300	23215	9.7351	5.1056	6483.0	1.0905	400.89	2.5876	1.5493	28.964
23400	23314	9.7348	5.0251	6486.1	1.0733	400.98	2.5475	1.5740	28.964
23500	23413	9.7345	4.9458	6489.2	1.0564	401.07	2.5079	1.5992	28.964
23600	23513	9.7342	4.8679	6492.4	1.0398	401.16	2.4690	1.6248	28.964
23700	23612	9.7339	4.7912	6495.5	1.0235	401.26	2.4308	1.6507	28.964
23800	23711	9.7336	4.7157	6498.6	1.0074	401.35	2.3931	1.6771	28.964
23900	23810	9.7333	4.6415	6501.8	9.9155 +23	401.44	2.3560	1.7039	28.964
24000	23910	9.7330	4.5685 - 1	6504.9	9.7598 +23	401.53	2.3196 + 8	1.7310 - 6	28.964
24100	24009	9.7327	4.4966	6508.0	9.6066	401.62	2.2837	1.7587	28.964
24200	24108	9.7324	4.4259	6511.2	9.4559	401.71	2.2483	1.7867	28.964
24300	24207	9.7321	4.3564	6514.3	9.3076	401.80	2.2136	1.8151	28.964
24400	24307	9.7318	4.2880	6517.4	9.1618	401.89	2.1794	1.8440	28.964
24500	24406	9.7315	4.2207	6520.6	9.0182	401.98	2.1457	1.8734	28.964
24600	24505	9.7312	4.1545	6523.7	8.8770	402.07	2.1126	1.9032	28.964
24700	24604	9.7309	4.0893	6526.8	8.7381	402.16	2.0800	1.9334	28.964
24800	24704	9.7306	4.0252	6530.0	8.6014	402.25	2.0479	1.9642	28.964
24900	24803	9.7303	3.9622	6533.1	8.4670	402.34	2.0164	1.9954	28.964
25000	24902	9.7300	3.9001 - 1	6536.2	8.3346 +23	402.43	1.9853 + 8	2.0270 - 6	28.964
25100	25001	9.7297	3.8391	6539.4	8.2045	402.52	1.9547	2.0592	28.964
25200	25100	9.7293	3.7790	6542.5	8.0764	402.61	1.9246	2.0919	28.964
25300	25200	9.7290	3.7200	6545.6	7.9503	402.70	1.8950	2.1250	28.964
25400	25299	9.7287	3.6618	6548.7	7.8263	402.79	1.8659	2.1587	28.964
25500	25398	9.7284	3.6046	6551.9	7.7043	402.88	1.8372	2.1929	28.964
25600	25497	9.7281	3.5483	6555.0	7.5842	402.97	1.8090	2.2276	28.964
25700	25597	9.7278	3.4930	6558.1	7.4661	403.06	1.7812	2.2628	28.964
25800	25696	9.7275	3.4385	6561.3	7.3499	403.15	1.7539	2.2986	28.964
25900	25795	9.7272	3.3849	6564.4	7.2355	403.24	1.7270	2.3350	28.964
26000	25894	9.7269	3.3321 - 1	6567.5	7.1230 +23	403.33	1.7005 + 8	2.3719 - 6	28.964
26100	25993	9.7266	3.2802	6570.7	7.0122	403.42	1.6744	2.4093	28.964
26200	26092	9.7263	3.2291	6573.8	6.9033	403.51	1.6488	2.4473	28.964
26300	26192	9.7260	3.1789	6576.9	6.7961	403.60	1.6235	2.4860	28.964
26400	26291	9.7257	3.1294	6580.1	6.6905	403.69	1.5987	2.5252	28.964
26500	26390	9.7254	3.0808	6583.2	6.5867	403.78	1.5742	2.5650	28.964
26600	26489	9.7251	3.0329	6586.3	6.4846	403.87	1.5501	2.6054	28.964
26700	26588	9.7248	2.9858	6589.5	6.3840	403.96	1.5264	2.6464	28.964
26800	26687	9.7245	2.9394	6592.6	6.2851	404.05	1.5031	2.6880	28.964
26900	26787	9.7242	2.8938	6595.7	6.1878	404.14	1.4802	2.7303	28.964

TABLE II.—Continued

## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
$H, \text{m}$	$Z, \text{m}$								
27000	27115	9.7235	2.7981 - 1	6602.5	5.9836 +23	404.33	1.4320 + 8	2.8235 - 6	28.964
27100	27216	9.7232	2.7544	6605.6	5.8902	404.42	1.4100	2.8682	28.964
27200	27317	9.7229	2.7114	6608.8	5.7984	404.51	1.3883	2.9137	28.964
27300	27418	9.7226	2.6690	6612.0	5.7081	404.60	1.3670	2.9598	28.964
27400	27519	9.7223	2.6274	6615.1	5.6192	404.69	1.3460	3.0066	28.964
27500	27620	9.7220	2.5864	6618.3	5.5317	404.78	1.3253	3.0542	28.964
27600	27720	9.7217	2.5461	6621.5	5.4456	404.87	1.3050	3.1024	28.964
27700	27821	9.7214	2.5064	6624.6	5.3609	404.96	1.2850	3.1515	28.964
27800	27922	9.7211	2.4673	6627.8	5.2775	405.05	1.2653	3.2012	28.964
27900	28023	9.7207	2.4289	6630.9	5.1955	405.14	1.2459	3.2518	28.964
28000	28124	9.7204	2.3911 - 1	6634.1	5.1148 +23	405.23	1.2268 + 8	3.3031 - 6	28.964
28100	28225	9.7201	2.3539	6637.3	5.0354	405.32	1.2080	3.3552	28.964
28200	28326	9.7198	2.3173	6640.4	4.9572	405.41	1.1896	3.4081	28.964
28300	28427	9.7195	2.2813	6643.6	4.8803	405.50	1.1714	3.4618	28.964
28400	28527	9.7192	2.2458	6646.8	4.8047	405.59	1.1535	3.5163	28.964
28500	28628	9.7189	2.2109	6649.9	4.7302	405.68	1.1358	3.5717	28.964
28600	28729	9.7186	2.1766	6653.1	4.6569	405.77	1.1185	3.6279	28.964
28700	28830	9.7183	2.1428	6656.3	4.5848	405.86	1.1014	3.6849	28.964
28800	28931	9.7180	2.1096	6659.4	4.5138	405.95	1.0846	3.7429	28.964
28900	29032	9.7177	2.0769	6662.6	4.4440	406.04	1.0681	3.8017	28.964
29000	29133	9.7174	2.0447 - 1	6665.7	4.3752 +23	406.13	1.0518 + 8	3.8614 - 6	28.964
29100	29234	9.7171	2.0130	6668.9	4.3076	406.22	1.0357	3.9220	28.964
29200	29335	9.7167	1.9819	6672.1	4.2411	406.31	1.0200	3.9836	28.964
29300	29436	9.7164	1.9512	6675.2	4.1755	406.40	1.0044	4.0461	28.964
29400	29537	9.7161	1.9210	6678.4	4.1111	406.49	9.8914 + 7	4.1095	28.964
29500	29638	9.7158	1.8913	6681.6	4.0476	406.58	9.7410	4.1740	28.964
29600	29739	9.7155	1.8621	6684.7	3.9852	406.67	9.5928	4.2393	28.964
29700	29839	9.7152	1.8333	6687.9	3.9238	406.76	9.4470	4.3057	28.964
29800	29940	9.7149	1.8050	6691.1	3.8633	406.85	9.3035	4.3731	28.964
29900	30041	9.7146	1.7771	6694.2	3.8038	406.94	9.1622	4.4415	28.964
30000	30142	9.7143	1.7497 - 1	6697.4	3.7452 +23	407.03	9.0231 + 7	4.5110 - 6	28.964
30100	30243	9.7140	1.7227	6700.6	3.6876	407.12	8.8862	4.5815	28.964
30200	30344	9.7137	1.6962	6703.7	3.6308	407.21	8.7514	4.6531	28.964
30300	30445	9.7134	1.6700	6706.9	3.5750	407.30	8.6187	4.7258	28.964
30400	30546	9.7131	1.6443	6710.1	3.5200	407.39	8.4881	4.7996	28.964
30500	30647	9.7128	1.6190	6713.2	3.4660	407.48	8.3595	4.8744	28.964
30600	30748	9.7124	1.5941	6716.4	3.4127	407.57	8.2330	4.9505	28.964
30700	30849	9.7121	1.5696	6719.6	3.3603	407.66	8.1084	5.0277	28.964
30800	30950	9.7118	1.5454	6722.7	3.3088	407.75	7.9857	5.1060	28.964
30900	31051	9.7115	1.5217	6725.9	3.2580	407.84	7.8649	5.1855	28.964
31000	31152	9.7112	1.4983 - 1	6729.1	3.2081 +23	407.93	7.7461 + 7	5.2663 - 6	28.964
31100	31253	9.7109	1.4753	6732.2	3.1589	408.02	7.6290	5.3482	28.964
31200	31354	9.7106	1.4527	6735.4	3.1105	408.11	7.5138	5.4314	28.964
31300	31455	9.7103	1.4304	6738.6	3.0629	408.20	7.4004	5.5159	28.964
31400	31556	9.7100	1.4084	6741.8	3.0160	408.29	7.2888	5.6016	28.964
31500	31657	9.7097	1.3869	6744.9	2.9699	408.38	7.1788	5.6886	28.964
31600	31758	9.7094	1.3656	6748.1	2.9245	408.47	7.0706	5.7770	28.964
31700	31859	9.7091	1.3447	6751.3	2.8798	408.56	6.9641	5.8666	28.964
31800	31960	9.7088	1.3241	6754.4	2.8358	408.65	6.8592	5.9576	28.964
31900	32061	9.7085	1.3038	6757.6	2.7925	408.73	6.7559	6.0500	28.964
32000	32162	9.7082	1.2839 - 1	6760.8	2.7499 +23	408.82	6.6542 + 7	6.1438 - 6	28.964
32200	32364	9.7075	1.2430	6777.8	2.6625	409.32	6.4507	6.3455	28.964
32400	32566	9.7069	1.2035	6794.7	2.5781	409.82	6.2538	6.5532	28.964
32600	32768	9.7063	1.1654	6811.7	2.4966	410.32	6.0634	6.7672	28.964
32800	32970	9.7057	1.1286	6828.7	2.4178	410.82	5.8793	6.9876	28.964
33000	33172	9.7051	1.0930	6845.7	2.3417	411.32	5.7011	7.2147	28.964
33200	33374	9.7045	1.0586	6862.7	2.2682	411.82	5.5288	7.4486	28.964
33400	33576	9.7039	1.0254	6879.7	2.1971	412.31	5.3621	7.6895	28.964
33600	33779	9.7032	9.9326 - 2	6896.7	2.1285	412.81	5.2008	7.9375	28.964
33800	33981	9.7026	9.6224	6913.7	2.0621	413.31	5.0447	8.1929	28.964
34000	34183	9.7020	9.3225 - 2	6930.7	1.9980 +23	413.80	4.8936 + 7	8.4559 - 6	28.964
34200	34385	9.7014	9.0327	6947.7	1.9360	414.29	4.7474	8.7267	28.964
34400	34587	9.7008	8.7525	6964.8	1.8760	414.79	4.6059	9.0055	28.964
34600	34789	9.7002	8.4816	6981.8	1.8181	415.28	4.4690	9.2925	28.964
34800	34992	9.6996	8.2198	6998.8	1.7621	415.77	4.3364	9.5879	28.964
35000	35194	9.6989	7.9666	7015.8	1.7079	416.27	4.2081	9.8920	28.964
35200	35396	9.6983	7.7218	7032.8	1.6555	416.76	4.0839	1.0205 - 5	28.964
35400	35598	9.6977	7.4850	7049.8	1.6049	417.25	3.9636	1.0527	28.964
35600	35801	9.6971	7.2561	7066.9	1.5559	417.74	3.8471	1.0859	28.964
35800	36003	9.6965	7.0346	7083.9	1.5085	418.23	3.7343	1.1200	28.964
36000	36205	9.6959	6.8204 - 2	7100.9	1.4627 +23	418.72	3.6251 + 7	1.1551 - 5	28.964
36200	36407	9.6953	6.6132	7117.9	1.4183	419.21	3.5193	1.1912	28.964
36400	36610	9.6946	6.4128	7135.0	1.3754	419.69	3.4168	1.2283	28.964
36600	36812	9.6940	6.2189	7152.0	1.3339	420.18	3.3175	1.2666	28.964
36800	37014	9.6934	6.0313	7169.1	1.2937	420.67	3.2214	1.3059	28.964
37000	37217	9.6928	5.8497	7186.1	1.2549	421.15	3.1282	1.3463	28.964
37200	37419	9.6922	5.6740	7203.1	1.2173	421.64	3.0379	1.3879	28.964
37400	37621	9.6916	5.5040	7220.2	1.1809	422.12	2.9505	1.4307	28.964
37600	37824	9.6910	5.3394	7237.2	1.1456	422.61	2.8657	1.4747	28.964
37800	38026	9.6904	5.1801	7254.3	1.1115	423.09	2.7836	1.5200	28.964



TABLE II.—Continued

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## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
27000	26886	9.7239	2.8489 - 1	6598.9	6.0920 +23	404.23	1.4576 + 8	2.7733 - 6	28.964
27100	26985	9.7236	2.8048	6602.0	5.9977	404.32	1.4354	2.8168	28.964
27200	27084	9.7233	2.7613	6605.1	5.9050	404.41	1.4135	2.8611	28.964
27300	27183	9.7229	2.7185	6608.3	5.8137	404.50	1.3919	2.9060	28.964
27400	27282	9.7226	2.6764	6611.4	5.7239	404.58	1.3707	2.9516	28.964
27500	27382	9.7223	2.6350	6614.5	5.6355	404.67	1.3499	2.9979	28.964
27600	27481	9.7220	2.5943	6617.7	5.5485	404.76	1.3293	3.0449	28.964
27700	27580	9.7217	2.5542	6620.8	5.4629	404.85	1.3091	3.0926	28.964
27800	27679	9.7214	2.5147	6624.0	5.3786	404.94	1.2892	3.1411	28.964
27900	27778	9.7211	2.4758	6627.1	5.2957	405.03	1.2696	3.1903	28.964
28000	27877	9.7208	2.4376 - 1	6630.2	5.2141 +23	405.12	1.2503 + 8	3.2402 - 6	28.964
28100	27976	9.7205	2.4000	6633.4	5.1338	405.21	1.2313	3.2909	28.964
28200	28075	9.7202	2.3630	6636.5	5.0548	405.30	1.2126	3.3423	28.964
28300	28175	9.7199	2.3266	6639.6	4.9770	405.39	1.1942	3.3945	28.964
28400	28274	9.7196	2.2907	6642.8	4.9005	405.48	1.1761	3.4476	28.964
28500	28373	9.7193	2.2554	6645.9	4.8251	405.57	1.1583	3.5014	28.964
28600	28472	9.7190	2.2207	6649.0	4.7510	405.66	1.1408	3.5560	28.964
28700	28571	9.7187	2.1865	6652.2	4.6780	405.75	1.1235	3.6115	28.964
28800	28670	9.7184	2.1529	6655.3	4.6062	405.84	1.1065	3.6678	28.964
28900	28769	9.7181	2.1198	6658.4	4.5356	405.93	1.0898	3.7249	28.964
29000	28868	9.7178	2.0872 - 1	6661.6	4.4660 +23	406.01	1.0733 + 8	3.7829 - 6	28.964
29100	28967	9.7175	2.0552	6664.7	4.3976	406.10	1.0571	3.8418	28.964
29200	29066	9.7172	2.0236	6667.8	4.3302	406.19	1.0411	3.9016	28.964
29300	29166	9.7169	1.9926	6671.0	4.2639	406.28	1.0254	3.9623	28.964
29400	29265	9.7166	1.9620	6674.1	4.1986	406.37	1.0099	4.0239	28.964
29500	29364	9.7163	1.9319	6677.3	4.1344	406.46	9.9466 + 7	4.0864	28.964
29600	29463	9.7159	1.9023	6680.4	4.0711	406.55	9.7967	4.1499	28.964
29700	29562	9.7156	1.8732	6683.5	4.0089	406.64	9.6490	4.2143	28.964
29800	29661	9.7153	1.8445	6686.7	3.9477	406.73	9.5037	4.2797	28.964
29900	29760	9.7150	1.8163	6689.8	3.8874	406.82	9.3606	4.3460	28.964
30000	29859	9.7147	1.7885 - 1	6692.9	3.8280 +23	406.91	9.2197 + 7	4.4134 - 6	28.964
30100	29958	9.7144	1.7612	6696.1	3.7696	406.99	9.0811	4.4818	28.964
30200	30057	9.7141	1.7342	6699.2	3.7121	407.08	8.9445	4.5512	28.964
30300	30156	9.7138	1.7078	6702.3	3.6555	407.17	8.8101	4.6216	28.964
30400	30255	9.7135	1.6817	6705.5	3.5998	407.26	8.6778	4.6932	28.964
30500	30354	9.7132	1.6560	6708.6	3.5450	407.35	8.5475	4.7657	28.964
30600	30453	9.7129	1.6308	6711.8	3.4911	407.44	8.4192	4.8394	28.964
30700	30552	9.7126	1.6059	6714.9	3.4380	407.53	8.2929	4.9142	28.964
30800	30651	9.7123	1.5814	6718.0	3.3857	407.62	8.1686	4.9901	28.964
30900	30751	9.7120	1.5573	6721.2	3.3342	407.71	8.0462	5.0671	28.964
31000	30850	9.7117	1.5336 - 1	6724.3	3.2835 +23	407.79	7.9256 + 7	5.1453 - 6	28.964
31100	30949	9.7114	1.5103	6727.4	3.2337	407.88	7.8070	5.2246	28.964
31200	31048	9.7111	1.4873	6730.6	3.1846	407.97	7.6901	5.3051	28.964
31300	31147	9.7108	1.4647	6733.7	3.1363	408.06	7.5751	5.3869	28.964
31400	31246	9.7105	1.4424	6736.9	3.0887	408.15	7.4619	5.4698	28.964
31500	31345	9.7102	1.4205	6740.0	3.0419	408.24	7.3503	5.5540	28.964
31600	31444	9.7099	1.3990	6743.1	2.9958	408.33	7.2405	5.6394	28.964
31700	31543	9.7096	1.3777	6746.3	2.9504	408.42	7.1324	5.7262	28.964
31800	31642	9.7093	1.3568	6749.4	2.9058	408.50	7.0260	5.8142	28.964
31900	31741	9.7089	1.3363	6752.6	2.8618	408.59	6.9212	5.9035	28.964
32000	31840	9.7086	1.3160 - 1	6755.7	2.8185 +23	408.68	6.8180 + 7	5.9942 - 6	28.964
32200	32038	9.7080	1.2761	6764.0	2.7332	408.92	6.6153	6.1814	28.964
32400	32236	9.7074	1.2359	6780.8	2.6472	409.41	6.4151	6.3821	28.964
32600	32434	9.7068	1.1970	6797.6	2.5642	409.91	6.2213	6.5887	28.964
32800	32632	9.7062	1.1595	6814.4	2.4839	410.40	6.0339	6.8016	28.964
33000	32830	9.7056	1.1232	6831.2	2.4064	410.90	5.8526	7.0208	28.964
33200	33027	9.7050	1.0882	6848.1	2.3314	411.39	5.6771	7.2464	28.964
33400	33225	9.7044	1.0543	6864.9	2.2590	411.88	5.5073	7.4788	28.964
33600	33423	9.7038	1.0216	6881.7	2.1890	412.37	5.3430	7.7180	28.964
33800	33621	9.7032	9.8992 - 2	6898.5	2.1213	412.86	5.1840	7.9642	28.964
34000	33819	9.7026	9.5933 - 2	6915.4	2.0559 +23	413.35	5.0300 + 7	8.2177 - 6	28.964
34200	34017	9.7020	9.2975	6932.2	1.9926	413.84	4.8810	8.4786	28.964
34400	34215	9.7014	9.0116	6949.0	1.9315	414.33	4.7368	8.7471	28.964
34600	34413	9.7007	8.7351	6965.8	1.8723	414.82	4.5971	9.0234	28.964
34800	34610	9.7001	8.4677	6982.7	1.8151	415.31	4.4619	9.3078	28.964
35000	34808	9.6995	8.2091	6999.5	1.7598	415.79	4.3310	9.6004	28.964
35200	35006	9.6989	7.9590	7016.3	1.7063	416.28	4.2042	9.9015	28.964
35400	35204	9.6983	7.7170	7033.2	1.6545	416.77	4.0815	1.0211 - 5	28.964
35600	35402	9.6977	7.4830	7050.0	1.6044	417.25	3.9626	1.0530	28.964
35800	35599	9.6971	7.2567	7066.8	1.5560	417.74	3.8474	1.0858	28.964
36000	35797	9.6965	7.0376 - 2	7083.7	1.5091 +23	418.22	3.7358 + 7	1.1195 - 5	28.964
36200	35995	9.6959	6.8257	7100.5	1.4638	418.70	3.6277	1.1542	28.964
36400	36193	9.6953	6.6207	7117.3	1.4199	419.19	3.5230	1.1898	28.964
36600	36390	9.6947	6.4222	7134.2	1.3774	419.67	3.4216	1.2265	28.964
36800	36588	9.6941	6.2302	7151.0	1.3363	420.15	3.3233	1.2643	28.964
37000	36786	9.6935	6.0443	7167.8	1.2965	420.63	3.2281	1.3031	28.964
37200	36984	9.6929	5.8644	7184.7	1.2580	421.11	3.1357	1.3429	28.964
37400	37181	9.6922	5.6903	7201.5	1.2207	421.59	3.0463	1.3840	28.964
37600	37379	9.6916	5.5217	7218.4	1.1847	422.07	2.9596	1.4261	28.964
37800	37577	9.6910	5.3585	7235.2	1.1497	422.55	2.8755	1.4695	28.964

TABLE II.—Continued

## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
$H, \text{m}$	$Z, \text{m}$								
38000	38229	9.6897	5.0259 - 2	7271.3	1.0785 +23	423.58	2.7040 + 7	1.5665 - 5	28.964
38200	38431	9.6891	4.8767	7288.4	1.0465	424.06	2.6269	1.6143	28.964
38400	38633	9.6885	4.7322	7305.4	1.0156	424.54	2.5521	1.6635	28.964
38600	38836	9.6879	4.5923	7322.5	9.8563 +22	425.02	2.4796	1.7141	28.964
38800	39038	9.6873	4.4568	7339.5	9.5662	425.51	2.4093	1.7661	28.964
39000	39241	9.6867	4.3256	7356.6	9.2852	425.99	2.3412	1.8195	28.964
39200	39443	9.6861	4.1986	7373.7	9.0131	426.47	2.2751	1.8745	28.964
39400	39646	9.6854	4.0755	7390.7	8.7495	426.95	2.2111	1.9309	28.964
39600	39848	9.6848	3.9564	7407.8	8.4942	427.43	2.1490	1.9890	28.964
39800	40051	9.6842	3.8410	7424.8	8.2469	427.90	2.0888	2.0486	28.964
40000	40253	9.6836	3.7291 - 2	7441.9	8.0074 +22	428.38	2.0303 + 7	2.1099 - 5	28.964
40200	40456	9.6830	3.6208	7459.0	7.7753	428.86	1.9737	2.1729	28.964
40400	40658	9.6824	3.5159	7476.1	7.5504	429.34	1.9187	2.2376	28.964
40600	40861	9.6818	3.4142	7493.1	7.3325	429.81	1.8654	2.3041	28.964
40800	41064	9.6811	3.3157	7510.2	7.1213	430.29	1.8137	2.3724	28.964
41000	41266	9.6805	3.2202	7527.3	6.9167	430.76	1.7636	2.4426	28.964
41200	41469	9.6799	3.1277	7544.4	6.7184	431.24	1.7149	2.5147	28.964
41400	41671	9.6793	3.0380	7561.5	6.5262	431.71	1.6677	2.5887	28.964
41600	41874	9.6787	2.9511	7578.6	6.3399	432.19	1.6218	2.6648	28.964
41800	42077	9.6781	2.8668	7595.7	6.1593	432.66	1.5774	2.7429	28.964
42000	42279	9.6775	2.7852 - 2	7612.7	5.9842 +22	433.13	1.5342 + 7	2.8232 - 5	28.964
42200	42482	9.6769	2.7060	7629.8	5.8145	433.61	1.4923	2.9056	28.964
42400	42685	9.6762	2.6293	7646.9	5.6499	434.08	1.4516	2.9902	28.964
42600	42887	9.6756	2.5548	7664.0	5.4904	434.55	1.4122	3.0771	28.964
42800	43090	9.6750	2.4827	7681.1	5.3356	435.02	1.3739	3.1664	28.964
43000	43293	9.6744	2.4127	7698.2	5.1856	435.49	1.3367	3.2580	28.964
43200	43496	9.6738	2.3449	7715.3	5.0401	435.96	1.3006	3.3521	28.964
43400	43698	9.6732	2.2791	7732.4	4.8990	436.43	1.2655	3.4486	28.964
43600	43901	9.6726	2.2152	7749.6	4.7621	436.90	1.2315	3.5478	28.964
43800	44104	9.6720	2.1533	7766.7	4.6293	437.37	1.1984	3.6495	28.964
44000	44307	9.6713	2.0933 - 2	7783.8	4.5005 +22	437.83	1.1663 + 7	3.7540 - 5	28.964
44200	44510	9.6707	2.0350	7800.9	4.3755	438.30	1.1351	3.8612	28.964
44400	44712	9.6701	1.9785	7818.0	4.2543	438.77	1.1049	3.9712	28.964
44600	44915	9.6695	1.9237	7835.1	4.1366	439.23	1.0755	4.0842	28.964
44800	45118	9.6689	1.8705	7852.3	4.0225	439.70	1.0469	4.2000	28.964
45000	45321	9.6683	1.8189	7869.4	3.9117	440.16	1.0191	4.3190	28.964
45200	45524	9.6677	1.7688	7886.5	3.8043	440.63	9.9219 + 6	4.4410	28.964
45400	45727	9.6671	1.7202	7903.6	3.6999	441.09	9.6600	4.5662	28.964
45600	45930	9.6664	1.6730	7920.8	3.5987	441.56	9.4055	4.6947	28.964
45800	46132	9.6658	1.6272	7937.9	3.5004	442.02	9.1583	4.8265	28.964
46000	46335	9.6652	1.5828 - 2	7955.0	3.4050 +22	442.48	8.9180 + 6	4.9617 - 5	28.964
46200	46538	9.6646	1.5396	7972.2	3.3124	442.95	8.6846	5.1004	28.964
46400	46741	9.6640	1.4977	7989.3	3.2225	443.41	8.4577	5.2426	28.964
46600	46944	9.6634	1.4571	8006.5	3.1353	443.87	8.2372	5.3886	28.964
46800	47147	9.6628	1.4176	8023.6	3.0505	444.33	8.0229	5.5383	28.964
47000	47350	9.6621	1.3793	8040.7	2.9683	444.79	7.8146	5.6918	28.964
47200	47553	9.6615	1.3448	8041.3	2.8943	444.79	7.6198	5.8373	28.964
47400	47756	9.6609	1.3112	8041.8	2.8221	444.79	7.4298	5.9866	28.964
47600	47959	9.6603	1.2784	8042.3	2.7517	444.79	7.2446	6.1396	28.964
47800	48162	9.6597	1.2465	8042.8	2.6831	444.79	7.0640	6.2966	28.964
48000	48365	9.6591	1.2153 - 2	8043.3	2.6143 +22	444.79	6.8879 + 6	6.4576 - 5	28.964
48200	48568	9.6585	1.1850	8043.8	2.5510	444.79	6.7162	6.6227	28.964
48400	48771	9.6579	1.1554	8044.3	2.4874	444.79	6.5488	6.7920	28.964
48600	48974	9.6572	1.1265	8044.8	2.4254	444.79	6.3855	6.9656	28.964
48800	49178	9.6566	1.0983	8045.3	2.3650	444.79	6.2263	7.1437	28.964
49000	49381	9.6560	1.0709	8045.8	2.3060	444.79	6.0711	7.3264	28.964
49200	49584	9.6554	1.0441	8046.4	2.2485	444.79	5.9197	7.5137	28.964
49400	49787	9.6548	1.0180	8046.9	2.1925	444.79	5.7722	7.7058	28.964
49600	49990	9.6542	9.9259 - 3	8047.4	2.1378	444.79	5.6283	7.9028	28.964
49800	50193	9.6536	9.6778	8047.9	2.0845	444.79	5.4880	8.1048	28.964
50000	50396	9.6530	9.4359 - 3	8048.4	2.0326 +22	444.79	5.3512 + 6	8.3120 - 5	28.964
50500	50904	9.6514	8.8574	8049.7	1.9082	444.79	5.0239	8.8535	28.964
51000	51413	9.6499	8.3143	8050.9	1.7915	444.79	4.7166	9.4303	28.964
51500	51921	9.6484	7.8046	8052.2	1.6819	444.79	4.4281	1.0045 - 4	28.964
52000	52429	9.6468	7.3261	8053.5	1.5791	444.79	4.1573	1.0699	28.964
52500	52937	9.6453	6.9016	8055.0	1.4878	444.79	3.9098	1.1355	28.964
53000	53446	9.6438	6.5003	7996.5	1.4015	443.14	3.6762	1.2054	28.964
53500	53954	9.6422	6.1209	7968.0	1.3199	442.32	3.4557	1.2800	28.964
54000	54463	9.6407	5.7624	7939.5	1.2428	441.49	3.2478	1.3594	28.964
54500	54971	9.6392	5.4237	7911.0	1.1700	440.66	3.0516	1.4440	28.964
55000	55480	9.6377	5.1037 - 3	7882.5	1.1011 +22	439.83	2.8666 + 6	1.5343 - 4	28.964
55500	55989	9.6361	4.8015	7853.9	1.0361	439.00	2.6922	1.6306	28.964
56000	56498	9.6346	4.5161	7825.4	9.7465 +21	438.17	2.5278	1.7334	28.964
56500	57007	9.6331	4.2467	7796.8	9.1666	437.33	2.3728	1.8431	28.964
57000	57516	9.6315	3.9925	7768.3	8.6191	436.50	2.2269	1.9601	28.964
57500	58025	9.6300	3.7525	7739.7	8.1025	435.66	2.0894	2.0851	28.964
58000	58534	9.6285	3.5262	7711.1	7.6149	434.82	1.9599	2.2186	28.964
58500	59043	9.6270	3.3127	7682.5	7.1550	433.98	1.8379	2.3612	28.964
59000	59553	9.6254	3.1114	7653.9	6.7213	433.13	1.7232	2.5136	28.964
59500	60062	9.6239	2.9216	7625.3	6.3123	432.29	1.6151	2.6765	28.964

TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{v}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
38000	37774	9.6904	5.2004 - 2	7252.1	1.1159 +23	423.03	2.7941 + 7	1.5140 - 5	28.964
38200	37972	9.6898	5.0474	7268.9	1.0831	423.51	2.7151	1.5598	28.964
38400	38169	9.6892	4.8992	7285.8	1.0514	423.99	2.6385	1.6069	28.964
38600	38367	9.6886	4.7557	7302.6	1.0206	424.46	2.5643	1.6553	28.964
38800	38565	9.6880	4.6167	7319.5	9.9087 +22	424.94	2.4923	1.7050	28.964
39000	38762	9.6874	4.4821	7336.3	9.6204	425.41	2.4225	1.7561	28.964
39200	38960	9.6868	4.3517	7353.2	9.3411	425.89	2.3547	1.8086	28.964
39400	39157	9.6862	4.2254	7370.0	9.0705	426.36	2.2891	1.8626	28.964
39600	39355	9.6856	4.1030	7386.9	8.8083	426.84	2.2254	1.9180	28.964
39800	39552	9.6850	3.9844	7403.7	8.5543	427.31	2.1636	1.9750	28.964
40000	39750	9.6844	3.8696 - 2	7420.6	8.3082 +22	427.78	2.1037 + 7	2.0335 - 5	28.964
40200	39947	9.6838	3.7582	7437.4	8.0697	428.26	2.0456	2.0936	28.964
40400	40145	9.6832	3.6504	7454.3	7.8386	428.73	1.9892	2.1553	28.964
40600	40342	9.6826	3.5458	7471.1	7.6145	429.20	1.9344	2.2187	28.964
40800	40540	9.6819	3.4445	7488.0	7.3974	429.67	1.8813	2.2839	28.964
41000	40737	9.6813	3.3463	7504.9	7.1869	430.14	1.8298	2.3508	28.964
41200	40935	9.6807	3.2511	7521.7	6.9829	430.61	1.7798	2.4194	28.964
41400	41132	9.6801	3.1588	7538.6	6.7851	431.08	1.7313	2.4900	28.964
41600	41329	9.6795	3.0693	7555.4	6.5933	431.55	1.6841	2.5624	28.964
41800	41527	9.6789	2.9825	7572.3	6.4073	432.01	1.6384	2.6368	28.964
42000	41724	9.6783	2.8984 - 2	7589.2	6.2270 +22	432.48	1.5940 + 7	2.7131 - 5	28.964
42200	41922	9.6777	2.8169	7606.0	6.0522	432.95	1.5509	2.7915	28.964
42400	42119	9.6771	2.7378	7622.9	5.8826	433.41	1.5091	2.8720	28.964
42600	42316	9.6765	2.6611	7639.8	5.7181	433.88	1.4685	2.9546	28.964
42800	42514	9.6759	2.5867	7656.7	5.5586	434.35	1.4291	3.0394	28.964
43000	42711	9.6753	2.5145	7673.5	5.4039	434.81	1.3908	3.1264	28.964
43200	42908	9.6747	2.4445	7690.4	5.2538	435.27	1.3536	3.2157	28.964
43400	43106	9.6741	2.3766	7707.3	5.1082	435.74	1.3175	3.3074	28.964
43600	43303	9.6735	2.3107	7724.1	4.9669	436.20	1.2824	3.4014	28.964
43800	43500	9.6729	2.2468	7741.0	4.8298	436.66	1.2483	3.4980	28.964
44000	43697	9.6723	2.1848 - 2	7757.9	4.6968 +22	437.13	1.2152 + 7	3.5970 - 5	28.964
44200	43895	9.6717	2.1247	7774.8	4.5678	437.59	1.1831	3.6987	28.964
44400	44092	9.6711	2.0663	7791.7	4.4425	438.05	1.1519	3.8029	28.964
44600	44289	9.6705	2.0096	7808.5	4.3210	438.51	1.1215	3.9099	28.964
44800	44486	9.6698	1.9546	7825.4	4.2030	438.97	1.0921	4.0197	28.964
45000	44684	9.6692	1.9012	7842.3	4.0885	439.43	1.0634	4.1322	28.964
45200	44881	9.6686	1.8494	7859.2	3.9773	439.89	1.0356	4.2477	28.964
45400	45078	9.6680	1.7992	7876.1	3.8694	440.35	1.0085	4.3662	28.964
45600	45275	9.6674	1.7503	7892.9	3.7647	440.80	9.8225 + 6	4.4877	28.964
45800	45472	9.6668	1.7029	7909.8	3.6630	441.26	9.5671	4.6123	28.964
46000	45669	9.6662	1.6569 - 2	7926.7	3.5642 +22	441.72	9.3188 + 6	4.7401 - 5	28.964
46200	45867	9.6656	1.6123	7943.6	3.4683	442.17	9.0775	4.8711	28.964
46400	46064	9.6650	1.5689	7960.5	3.3752	442.63	8.8429	5.0055	28.964
46600	46261	9.6644	1.5268	7977.4	3.2848	443.09	8.6149	5.1433	28.964
46800	46458	9.6638	1.4858	7994.3	3.1970	443.54	8.3932	5.2845	28.964
47000	46655	9.6632	1.4461	8011.2	3.1117	444.00	8.1777	5.4294	28.964
47200	46852	9.6626	1.4075	8028.1	3.0289	444.45	7.9681	5.5779	28.964
47400	47049	9.6620	1.3707	8045.0	2.9499	444.89	7.7663	5.7272	28.964
47600	47246	9.6614	1.3370	8061.9	2.8774	445.34	7.5755	5.8714	28.964
47800	47443	9.6608	1.3041	8078.8	2.8068	445.79	7.3894	6.0193	28.964
48000	47640	9.6602	1.2720 - 2	8095.7	2.7378 +22	446.24	7.2079 + 6	6.1709 - 5	28.964
48200	47837	9.6596	1.2406	8112.6	2.6706	446.69	7.0309	6.3262	28.964
48400	48034	9.6590	1.2101	8129.5	2.6050	447.14	6.8582	6.4855	28.964
48600	48231	9.6584	1.1803	8146.4	2.5410	447.59	6.6898	6.6488	28.964
48800	48428	9.6578	1.1512	8163.3	2.4786	448.04	6.5255	6.8162	28.964
49000	48625	9.6572	1.1229	8180.2	2.4178	448.49	6.3653	6.9878	28.964
49200	48822	9.6566	1.0953	8197.1	2.3584	448.94	6.2090	7.1636	28.964
49400	49019	9.6560	1.0683	8214.0	2.3005	449.39	6.0565	7.3440	28.964
49600	49216	9.6554	1.0420	8230.9	2.2440	449.84	5.9079	7.5288	28.964
49800	49413	9.6548	1.0164	8247.8	2.1889	450.29	5.7628	7.7183	28.964
50000	49610	9.6542	9.9136 - 3	8264.7	2.1352 +22	450.74	5.6214 + 6	7.9125 - 5	28.964
50500	50102	9.6526	9.3150	8308.7	2.0066	451.19	5.2828	8.4197	28.964
51000	50594	9.6511	8.7526	8352.7	1.8857	451.64	4.9646	8.9593	28.964
51500	51086	9.6496	8.2243	8396.7	1.7722	452.09	4.6656	9.5333	28.964
52000	51578	9.6481	7.7279	8440.7	1.6655	452.54	4.3847	1.0144 - 4	28.964
52500	52070	9.6466	7.2653	8484.7	1.5660	452.99	4.1218	1.0788	28.964
53000	52562	9.6451	6.8508	8528.7	1.4769	453.44	3.8802	1.1439	28.964
53500	53053	9.6436	6.4587	8572.7	1.3926	453.89	3.6520	1.2132	28.964
54000	53545	9.6421	6.0878	8616.7	1.3128	454.34	3.4365	1.2869	28.964
54500	54037	9.6406	5.7369	8660.7	1.2373	454.79	3.2330	1.3654	28.964
55000	54528	9.6391	5.4052 - 3	8704.7	1.1660 +22	455.24	3.0409 + 6	1.4490 - 4	28.964
55500	55020	9.6376	5.0915	8748.7	1.0985	455.69	2.8596	1.5380	28.964
56000	55511	9.6361	4.7951	8792.7	1.0347	456.14	2.6885	1.6328	28.964
56500	56002	9.6346	4.5149	8836.7	9.7439 +21	456.59	2.5271	1.7339	28.964
57000	56493	9.6331	4.2502	8880.7	9.1741	457.04	2.3748	1.8416	28.964
57500	56984	9.6316	4.0001	8924.7	8.6357	457.49	2.2313	1.9564	28.964
58000	57476	9.6301	3.7640	8968.7	8.1271	457.94	2.0959	2.0788	28.964
58500	57967	9.6286	3.5410	9012.7	7.6468	458.39	1.9683	2.2094	28.964
59000	58457	9.6271	3.3304	9056.7	7.1932	458.84	1.8480	2.3487	28.964
59500	58948	9.6256	3.1317	9100.7	6.7651	459.29	1.7347	2.4973	28.964



TABLE II.—Concluded

## GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{m sec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
H, m	Z, m								
60000	60572	9.6224	2.7427 - 3	7596.7	5.9267 +21	431.44	1.5135 + 6	2.8506 - 4	28.964
60500	61081	9.6208	2.5741	7568.0	5.5633	430.59	1.4179	3.0368	28.964
61000	61591	9.6193	2.4153	7539.4	5.2209	429.74	1.3280	3.2360	28.964
61500	62101	9.6178	2.2744	7480.9	4.9172	428.04	1.2458	3.4358	28.964
62000	62611	9.6163	2.1408	7422.4	4.6289	426.33	1.1681	3.6498	28.964
62500	63121	9.6147	2.0140	7363.9	4.3554	424.61	1.0946	3.8790	28.964
63000	63631	9.6132	1.8937	7305.3	4.0961	422.89	1.0253	4.1246	28.964
63500	64141	9.6117	1.7798	7246.7	3.8502	421.15	9.5979 + 5	4.3880	28.964
64000	64651	9.6101	1.6718	7188.2	3.6173	419.41	8.9800	4.6706	28.964
64500	65161	9.6086	1.5696	7129.6	3.3966	417.67	8.3971	4.9739	28.964
65000	65672	9.6071	1.4729 - 3	7070.9	3.1878 +21	415.91	7.8477 + 5	5.2998 - 4	28.964
65500	66182	9.6056	1.3813	7012.3	2.9902	414.15	7.3300	5.6501	28.964
66000	66693	9.6040	1.2948	6953.6	2.8032	412.38	6.8425	6.0268	28.964
66500	67203	9.6025	1.2130	6894.9	2.6265	410.61	6.3836	6.4323	28.964
67000	67714	9.6010	1.1357	6836.2	2.4596	408.82	5.9518	6.8689	28.964
67500	68225	9.5995	1.0627	6777.5	2.3019	407.03	5.5459	7.3393	28.964
68000	68735	9.5979	9.9386 - 4	6718.8	2.1531	405.23	5.1644	7.8466	28.964
68500	69246	9.5964	9.2890	6660.0	2.0127	403.42	4.8061	8.3940	28.964
69000	69757	9.5949	8.6766	6601.3	1.8803	401.61	4.4697	8.9851	28.964
69500	70268	9.5933	8.0996	6542.5	1.7555	399.78	4.1542	9.6237	28.964
70000	70780	9.5918	7.5561 - 4	6483.6	1.6380 +21	397.95	3.8583 + 5	1.0314 - 3	28.964
70500	71291	9.5903	7.0446	6424.8	1.5274	396.11	3.5810	1.1061	28.964
71000	71802	9.5888	6.5634	6366.0	1.4233	394.26	3.3214	1.1870	28.964
71500	72314	9.5872	6.1110	6307.1	1.3254	392.40	3.0784	1.2747	28.964
72000	72825	9.5857	5.6859	6248.2	1.2334	390.54	2.8511	1.3698	28.964
72500	73337	9.5842	5.2868	6189.3	1.1470	388.66	2.6386	1.4730	28.964
73000	73848	9.5827	4.9122	6130.4	1.0659	386.77	2.4401	1.5851	28.964
73500	74360	9.5811	4.5608	6071.4	9.8978 +20	384.88	2.2548	1.7069	28.964
74000	74872	9.5796	4.2315	6012.5	9.1846	382.98	2.0820	1.8395	28.964
74500	75384	9.5781	3.9230	5953.5	8.5163	381.06	1.9209	1.9838	28.964
75000	75896	9.577	3.634 - 4	5894.	7.891 +20	379.1	1.771 + 5	2.141 - 3	28.964
75500	76408	9.575	3.364	5835.	7.305	377.2	1.631	2.313	28.964
76000	76920	9.574	3.111	5776.	6.758	375.3	1.501	2.500	28.964
76500	77432	9.572	2.876	5717.	6.246	373.3	1.380	2.705	28.964
77000	77944	9.570	2.655	5658.	5.769	371.3	1.268	2.929	28.964
77500	78457	9.569	2.450	5599.	5.323	369.4	1.164	3.174	28.964
78000	78969	9.567	2.258	5540.	4.908	367.4	1.067	3.442	28.964
78500	79482	9.566	2.080	5481.	4.521	365.4	9.778 + 4	3.737	28.964
79000	79994	9.564	1.914	5422.	4.161	363.4	8.950	4.060	28.964
79500	80507	9.563	1.741	5423.	3.786	363.4	8.142	4.463	28.964
80000	81020	9.561	1.584 - 4	5424.	3.444 +20	363.4	7.408 + 4	4.906 - 3	28.964
80500	81533	9.560	1.441	5424.	3.133	363.4	6.739	5.392	28.964
81000	82046	9.558	1.310	5425.	2.851	363.4	6.131	5.927	28.964
81500	82559	9.557	1.192	5426.	2.593	363.4	5.578	6.515	28.964
82000	83072	9.555	1.084	5427.	2.359	363.4	5.075	7.161	28.964
82500	83585	9.554	9.862 - 5	5428.	2.147	363.4	4.617	7.871	28.964
83000	84098	9.552	8.971	5429.	1.953	363.4	4.200	8.651	28.964
83500	84612	9.551	8.161	5430.	1.777	363.4	3.821	9.509	28.964
84000	85125	9.549	7.423	5430.	1.616	363.4	3.477	1.045 - 2	28.964
84500	85639	9.548	6.752	5431.	1.471	363.4	3.163	1.149	28.964
85000	86152	9.546	6.142 - 5	5432.	1.338 +20	363.4	2.878 + 4	1.263 - 2	28.964
85500	86666	9.545	5.587	5433.	1.217	363.4	2.618	1.388	28.964
86000	87180	9.543	5.082	5434.	1.107	363.4	2.382	1.526	28.964
86500	87693	9.542	4.623	5435.	1.007	363.4	2.167	1.677	28.964
87000	88207	9.540	4.205	5436.	9.165 +19	363.4	1.971	1.843	28.964
87500	88721	9.538	3.825	5437.	8.338	363.4	1.793	2.026	28.964
88000	89236	9.537	3.479	5437.	7.586	363.4	1.632	2.227	28.964
88500	89750	9.535	3.165	5438.	6.902	363.4	1.484	2.448	28.964
89000	90264	9.534	2.867	5463.	6.252	364.2	1.348	2.702	28.964
89500	90778	9.532	2.588	5510.	5.645	365.7	1.222	2.993	28.963
90000	91293	9.531	2.338 - 5	5558.	5.101 +19	367.3	1.109 + 4	3.312 - 2	28.96

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, m \text{ sec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{ sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
60000	59439	9.6241	2.9442 - 3	7628.8	6.3610 +21	432.39	1.6280 + 6	2.6560 - 4	28.964
60500	59930	9.6226	2.7673	7600.7	5.9797	431.56	1.5275	2.8254	28.964
61000	60420	9.6211	2.6004	7572.6	5.6199	430.73	1.4328	3.0062	28.964
61500	60911	9.6196	2.4430	7544.5	5.2806	429.90	1.3437	3.1994	28.964
62000	61401	9.6181	2.3017	7492.5	4.9760	428.38	1.2617	3.3952	28.964
62500	61891	9.6166	2.1692	7435.1	4.6903	426.70	1.1846	3.6021	28.964
63000	62382	9.6151	2.0434	7377.7	4.4189	425.02	1.1117	3.8233	28.964
63500	62872	9.6136	1.9239	7320.3	4.1612	423.33	1.0427	4.0600	28.964
64000	63362	9.6121	1.8106	7262.9	3.9168	421.63	9.7749 + 5	4.3134	28.964
64500	63852	9.6106	1.7032	7205.5	3.6849	419.93	9.1591	4.5848	28.964
65000	64342	9.6091	1.6013 - 3	7148.1	3.4651 +21	418.22	8.5776 + 5	4.8757 - 4	28.964
65500	64832	9.6076	1.5048	7090.6	3.2567	416.51	8.0288	5.1876	28.964
66000	65322	9.6061	1.4134	7033.2	3.0594	414.78	7.5111	5.5223	28.964
66500	65811	9.6046	1.3269	6975.7	2.8725	413.05	7.0229	5.8815	28.964
67000	66301	9.6031	1.2450	6918.3	2.6956	411.32	6.5628	6.2674	28.964
67500	66791	9.6016	1.1675	6860.8	2.5283	409.57	6.1294	6.6821	28.964
68000	67280	9.6001	1.0943	6803.3	2.3701	407.82	5.7213	7.1281	28.964
68500	67770	9.5986	1.0251	6745.9	2.2206	406.06	5.3372	7.6081	28.964
69000	68259	9.5971	9.5974 - 4	6688.4	2.0794	404.30	4.9760	8.1249	28.964
69500	68748	9.5956	8.9804	6630.8	1.9460	402.52	4.6364	8.6818	28.964
70000	69237	9.5941	8.3983 - 4	6573.3	1.8201 +21	400.74	4.3174 + 5	9.2821 - 4	28.964
70500	69727	9.5927	7.8492	6515.8	1.7014	398.95	4.0177	9.9299	28.964
71000	70216	9.5912	7.3317	6458.3	1.5895	397.16	3.7365	1.0629 - 3	28.964
71500	70705	9.5897	6.8441	6400.7	1.4840	395.35	3.4727	1.1385	28.964
72000	71193	9.5882	6.3850	6343.2	1.3847	393.54	3.2254	1.2201	28.964
72500	71682	9.5867	5.9529	6285.6	1.2912	391.72	2.9937	1.3085	28.964
73000	72171	9.5852	5.5465	6228.1	1.2032	389.89	2.7767	1.4041	28.964
73500	72660	9.5837	5.1645	6170.5	1.1205	388.06	2.5737	1.5078	28.964
74000	73148	9.5822	4.8055	6112.9	1.0428	386.21	2.3838	1.6202	28.964
74500	73637	9.5807	4.4685	6055.3	9.6980 +20	384.36	2.2063	1.7421	28.964
75000	74125	9.579	4.152 - 4	5998.	9.013 +20	382.5	2.041 + 5	1.874 - 3	28.964
75500	74614	9.578	3.856	5940.	8.370	380.6	1.886	2.018	28.964
76000	75102	9.576	3.578	5882.	7.768	378.7	1.741	2.175	28.964
76500	75590	9.575	3.317	5825.	7.204	376.9	1.607	2.345	28.964
77000	76078	9.573	3.073	5767.	6.675	375.0	1.482	2.531	28.964
77500	76566	9.572	2.845	5710.	6.181	373.0	1.365	2.733	28.964
78000	77054	9.570	2.632	5652.	5.719	371.1	1.256	2.954	28.964
78500	77542	9.569	2.433	5594.	5.287	369.2	1.155	3.195	28.964
79000	78030	9.567	2.247	5537.	4.884	367.3	1.062	3.459	28.964
79500	78518	9.566	2.074	5479.	4.508	365.3	9.747 + 4	3.748	28.964
80000	79006	9.564	1.912 - 4	5422.	4.157 +20	363.4	8.940 + 4	4.065 - 3	28.964
80500	79493	9.563	1.743	5423.	3.790	363.4	8.153	4.457	28.964
81000	79981	9.561	1.589	5423.	3.457	363.4	7.435	4.888	28.964
81500	80468	9.560	1.449	5424.	3.152	363.4	6.780	5.360	28.964
82000	80956	9.558	1.321	5425.	2.875	363.4	6.183	5.877	28.964
82500	81443	9.557	1.205	5426.	2.622	363.4	5.639	6.445	28.964
83000	81930	9.555	1.099	5427.	2.391	363.4	5.142	7.067	28.964
83500	82417	9.554	1.002	5428.	2.180	363.4	4.690	7.749	28.964
84000	82904	9.552	9.135 - 5	5429.	1.989	363.4	4.277	8.496	28.964
84500	83391	9.551	8.330	5429.	1.814	363.4	3.901	9.316	28.964
85000	83878	9.550	7.596 - 5	5430.	1.654 +20	363.4	3.558 + 4	1.021 - 2	28.964
85500	84365	9.548	6.927	5431.	1.509	363.4	3.245	1.120	28.964
86000	84852	9.547	6.317	5432.	1.376	363.4	2.959	1.228	28.964
86500	85339	9.545	5.761	5433.	1.255	363.4	2.699	1.346	28.964
87000	85825	9.544	5.253	5434.	1.145	363.4	2.462	1.476	28.964
87500	86312	9.542	4.791	5434.	1.044	363.4	2.245	1.618	28.964
88000	86798	9.541	4.369	5435.	9.522 +19	363.4	2.048	1.774	28.964
88500	87285	9.539	3.984	5436.	8.685	363.4	1.868	1.945	28.964
89000	87771	9.538	3.634	5437.	7.922	363.4	1.704	2.133	28.964
89500	88257	9.536	3.314	5438.	7.226	363.4	1.554	2.338	28.964
90000	88743	9.535	3.022 - 5	5439.	6.591 +19	363.4	1.418 + 4	2.563 - 2	28.96

TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
90000	88743	9.535	3.022 - 5	5439.	6.591 +19	363.4	1.418 + 4	2.563 - 2	28.96
90500	89229	9.533	2.735	5485.	5.965	364.9	1.288	2.832	28.96
91000	89715	9.532	2.477	5531.	5.403	366.4	1.172	3.127	28.96
91500	90201	9.530	2.245	5577.	4.898	367.9	1.067	3.449	28.96
92000	90687	9.529	2.036	5623.	4.444	369.4	9.716 + 3	3.802	28.96
92500	91173	9.527	1.849	5669.	4.035	370.9	8.858	4.187	28.96
93000	91659	9.526	1.679	5715.	3.667	372.3	8.081	4.607	28.96
93500	92144	9.524	1.527	5761.	3.335	373.8	7.378	5.066	28.95
94000	92630	9.523	1.389	5807.	3.035	375.3	6.742	5.566	28.95
94500	93116	9.521	1.265	5853.	2.764	376.7	6.164	6.111	28.95
95000	93601	9.520	1.153 - 5	5899.	2.520 +19	378.2	5.640 + 3	6.705 - 2	28.94
95500	94086	9.518	1.051	5946.	2.298	379.6	5.165	7.350	28.94
96000	94572	9.517	9.594 - 6	5992.	2.098	381.1	4.732	8.052	28.94
96500	95057	9.515	8.761	6038.	1.917	382.5	4.339	8.815	28.93
97000	95542	9.514	8.006	6084.	1.752	383.9	3.982	9.643	28.92
97500	96027	9.513	7.321	6130.	1.603	385.4	3.656	1.054 - 1	28.92
98000	96512	9.511	6.699	6177.	1.467	386.8	3.359	1.151	28.91
98500	96997	9.510	6.134	6223.	1.344	388.2	3.088	1.257	28.90
99000	97482	9.508	5.620	6269.	1.232	389.6	2.841	1.371	28.90
99500	97966	9.507	5.153	6315.	1.130	391.0	2.615	1.495	28.89
100000	98451	9.505	4.728 - 6	6362.	1.037 +19	392.4	2.409 + 3	1.629 - 1	28.88
101000	99420	9.502	3.952	6515.	8.681 +18	397.0	2.040	1.946	28.86
102000	100389	9.499	3.318	6668.	7.295	401.6	1.734	2.316	28.83
103000	101357	9.496	2.796	6821.	6.156	406.1	1.480	2.744	28.81
104000	102326	9.493	2.366	6974.	5.215	410.6	1.267	3.240	28.78
105000	103294	9.490	2.009	7128.	4.434	415.0	1.089	3.810	28.75
106000	104261	9.488	1.712	7281.	3.784	419.4	9.393 + 2	4.465	28.72
107000	105228	9.485	1.463	7435.	3.240	423.7	8.126	5.215	28.68
108000	106195	9.482	1.255	7588.	2.783	428.0	7.051	6.071	28.64
109000	107162	9.479	1.080	7742.	2.398	432.3	6.136	7.045	28.60
110000	108129	9.476	9.314 - 7	7896.	2.073 +18	436.5	5.356 + 2	8.150 - 1	28.56
111000	109095	9.473	7.919	8201.	1.766	444.8	4.649	9.568	28.51
112000	110060	9.470	6.773	8507.	1.513	452.9	4.057	1.117 + 0	28.47
113000	111026	9.467	5.825	8813.	1.304	460.9	3.557	1.296	28.42
114000	111991	9.464	5.036	9119.	1.129	468.8	3.134	1.496	28.37
115000	112956	9.461	4.374	9425.	9.830 +17	476.5	2.773	1.719	28.32
116000	113921	9.458	3.816	9732.	8.594	484.1	2.463	1.966	28.27
117000	114885	9.455	3.344	10038.	7.546	491.6	2.196	2.239	28.22
118000	115849	9.452	2.941	10345.	6.652	499.0	1.965	2.540	28.17
119000	116813	9.449	2.597	10652.	5.886	506.3	1.764	2.870	28.12
120000	117776	9.447	2.301 - 7	10959.	5.226 +17	513.4	1.588 + 2	3.233 + 0	28.07
121000	118739	9.444	1.994	11570.	4.539	527.5	1.417	3.722	28.02
122000	119702	9.441	1.741	12182.	3.972	541.2	1.272	4.254	27.97
123000	120665	9.438	1.530	12794.	3.498	554.5	1.148	4.830	27.91
124000	121627	9.435	1.353	13407.	3.100	567.5	1.041	5.451	27.86
125000	122589	9.432	1.203	14019.	2.761	580.3	9.484 + 1	6.118	27.81
126000	123551	9.429	1.075	14633.	2.472	592.7	8.674	6.833	27.76
127000	124512	9.426	9.647 - 8	15246.	2.224	604.9	7.963	7.597	27.72
128000	125473	9.423	8.696	15860.	2.009	616.9	7.334	8.411	27.67
129000	126434	9.420	7.869	16474.	1.821	628.7	6.777	9.276	27.62
130000	127394	9.417	7.147 - 8	17089.	1.657 +17	640.2	6.280 + 1	1.019 + 1	27.58
131000	128354	9.415	6.514	17704.	1.513	651.5	5.836	1.116	27.53
132000	129314	9.412	5.955	18320.	1.386	662.6	5.436	1.219	27.49
133000	130274	9.409	5.460	18936.	1.273	673.6	5.076	1.327	27.45
134000	131233	9.406	5.020	19552.	1.173	684.3	4.750	1.441	27.41
135000	132192	9.403	4.628	20168.	1.083	694.9	4.454	1.560	27.37
136000	133151	9.400	4.276	20785.	1.002	705.4	4.185	1.686	27.33
137000	134109	9.397	3.961	21403.	9.299 +16	715.7	3.939	1.817	27.30
138000	135067	9.394	3.676	22020.	8.645	725.8	3.714	1.954	27.26
139000	136025	9.391	3.419	22638.	8.053	735.8	3.507	2.098	27.23
140000	136983	9.388	3.186 - 8	23257.	7.516 +16	745.7	3.317 + 1	2.248 + 1	27.20
141000	137940	9.386	2.975	23876.	7.027	755.4	3.142	2.404	27.17
142000	138897	9.383	2.782	24495.	6.581	765.0	2.980	2.567	27.13
143000	139853	9.380	2.606	25115.	6.174	774.5	2.830	2.737	27.11
144000	140810	9.377	2.445	25735.	5.801	783.9	2.691	2.913	27.08
145000	141766	9.374	2.298	26355.	5.458	793.2	2.562	3.095	27.05
146000	142721	9.371	2.162	26976.	5.143	802.3	2.442	3.285	27.02
147000	143677	9.368	2.038	27597.	4.852	811.4	2.330	3.482	27.00
148000	144632	9.365	1.923	28218.	4.584	820.3	2.226	3.685	26.97
149000	145587	9.362	1.816	28840.	4.336	829.2	2.128	3.896	26.94
150000	146541	9.360	1.718 - 8	29462.	4.107 +16	838.0	2.037 + 1	4.114 + 1	26.92
151000	147496	9.357	1.635	29932.	3.913	844.5	1.956	4.317	26.89
152000	148450	9.354	1.557	30401.	3.732	851.0	1.880	4.527	26.87
153000	149403	9.351	1.484	30871.	3.562	857.4	1.807	4.743	26.84
154000	150357	9.348	1.416	31341.	3.402	863.8	1.739	4.967	26.82
155000	151310	9.345	1.351	31812.	3.251	870.1	1.674	5.197	26.79
156000	152263	9.342	1.291	32282.	3.109	876.4	1.613	5.434	26.77
157000	153215	9.339	1.234	32753.	2.975	882.6	1.554	5.678	26.74
158000	154167	9.337	1.180	33224.	2.849	888.8	1.499	5.930	26.71
159000	155119	9.334	1.129	33696.	2.730	894.9	1.446	6.188	26.69



TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
160000	156071	9.331	1.081 - 8	34168.	2.618 +16	901.0	1.396 + 1	6.454 + 1	26.66
161000	157022	9.328	1.040	34486.	2.523	905.1	1.351	6.697	26.63
162000	157973	9.325	1.002	34804.	2.432	909.1	1.308	6.948	26.60
163000	158924	9.322	9.646 - 9	35123.	2.345	913.1	1.267	7.205	26.58
164000	159874	9.319	9.292	35442.	2.262	917.1	1.228	7.470	26.55
165000	160825	9.317	8.954	35761.	2.182	921.1	1.190	7.741	26.52
166000	161775	9.314	8.631	36080.	2.107	925.0	1.153	8.020	26.49
167000	162724	9.311	8.322	36399.	2.034	929.0	1.118	8.307	26.47
168000	163673	9.308	8.027	36719.	1.964	932.9	1.085	8.601	26.44
169000	164622	9.305	7.745	37039.	1.897	936.8	1.052	8.904	26.42
170000	165571	9.302	7.475 - 9	37358.	1.830 +16	940.7	1.019 + 1	9.233 + 1	26.45
171000	166520	9.299	7.234	37686.	1.773	943.4	9.903 + 0	9.527	26.42
172000	167468	9.297	7.002	37814.	1.719	946.1	9.627	9.828	26.39
173000	168416	9.294	6.779	38041.	1.667	948.8	9.361	1.014 + 2	26.36
174000	169363	9.291	6.565	38269.	1.616	951.5	9.103	1.045	26.33
175000	170310	9.288	6.358	38497.	1.568	954.2	8.854	1.078	26.30
176000	171257	9.285	6.159	38726.	1.521	956.9	8.614	1.111	26.27
177000	172204	9.282	5.967	38954.	1.476	959.6	8.381	1.145	26.24
178000	173150	9.280	5.782	39182.	1.432	962.2	8.156	1.180	26.21
179000	174097	9.277	5.604	39411.	1.390	964.9	7.938	1.216	26.18
180000	175042	9.274	5.433 - 9	39640.	1.349 +16	967.5	7.727 + 0	1.252 + 2	26.15
181000	175988	9.271	5.268	39869.	1.310	970.2	7.524	1.290	26.12
182000	176933	9.268	5.108	40098.	1.272	972.8	7.326	1.328	26.09
183000	177878	9.265	4.954	40327.	1.236	975.4	7.135	1.367	26.06
184000	178823	9.263	4.806	40556.	1.201	978.1	6.950	1.407	26.03
185000	179767	9.260	4.663	40786.	1.166	980.7	6.771	1.448	26.00
186000	180711	9.257	4.525	41015.	1.134	983.3	6.597	1.490	25.97
187000	181655	9.254	4.392	41245.	1.102	985.9	6.429	1.533	25.94
188000	182598	9.251	4.263	41475.	1.071	988.5	6.266	1.577	25.91
189000	183542	9.248	4.139	41704.	1.041	991.0	6.109	1.622	25.88
190000	184485	9.246	4.019 - 9	41935.	1.013 +16	993.6	5.955 + 0	1.668 + 2	25.85
191000	185427	9.243	3.909	42103.	9.863 +15	995.5	5.811	1.713	25.82
192000	186370	9.240	3.802	42271.	9.607	997.3	5.671	1.759	25.79
193000	187312	9.237	3.698	42439.	9.359	999.1	5.535	1.805	25.76
194000	188253	9.234	3.598	42608.	9.119	1001.0	5.403	1.853	25.73
195000	189195	9.231	3.501	42776.	8.886	1002.8	5.274	1.901	25.70
196000	190136	9.229	3.407	42945.	8.659	1004.6	5.149	1.951	25.68
197000	191077	9.226	3.316	43113.	8.439	1006.4	5.027	2.002	25.65
198000	192018	9.223	3.227	43282.	8.226	1008.2	4.909	2.054	25.62
199000	192958	9.220	3.141	43451.	8.019	1010.0	4.794	2.107	25.59
200000	193898	9.217	3.058 - 9	43620.	7.818 +15	1011.8	4.682 + 0	2.161 + 2	25.56
201000	194838	9.215	2.977	43789.	7.622	1013.7	4.573	2.216	25.53
202000	195777	9.212	2.899	43958.	7.433	1015.5	4.467	2.273	25.50
203000	196716	9.209	2.823	44127.	7.248	1017.3	4.364	2.331	25.47
204000	197655	9.206	2.749	44297.	7.069	1019.0	4.264	2.390	25.44
205000	198594	9.203	2.678	44466.	6.896	1020.8	4.167	2.450	25.41
206000	199532	9.200	2.608	44636.	6.727	1022.6	4.072	2.512	25.38
207000	200470	9.198	2.541	44806.	6.562	1024.4	3.979	2.574	25.35
208000	201408	9.195	2.476	44975.	6.403	1026.2	3.889	2.639	25.33
209000	202346	9.192	2.412	45145.	6.248	1028.0	3.802	2.704	25.30
210000	203283	9.189	2.351 - 9	45315.	6.097 +15	1029.8	3.716 + 0	2.771 + 2	25.27
211000	204220	9.186	2.291	45485.	5.951	1031.5	3.633	2.839	25.24
212000	205156	9.184	2.233	45655.	5.808	1033.3	3.552	2.909	25.21
213000	206093	9.181	2.176	45826.	5.670	1035.1	3.474	2.980	25.18
214000	207029	9.178	2.122	45996.	5.535	1036.8	3.397	3.052	25.15
215000	207964	9.175	2.068	46166.	5.404	1038.6	3.322	3.126	25.12
216000	208900	9.173	2.017	46337.	5.277	1040.3	3.249	3.202	25.09
217000	209835	9.170	1.967	46507.	5.153	1042.1	3.179	3.279	25.06
218000	210770	9.167	1.918	46678.	5.033	1043.9	3.109	3.357	25.04
219000	211705	9.164	1.870	46849.	4.915	1045.6	3.042	3.437	25.01
220000	212639	9.161	1.824 - 9	47020.	4.801 +15	1047.3	2.976 + 0	3.519 + 2	24.98
221000	213573	9.159	1.779	47191.	4.690	1049.1	2.912	3.602	24.95
222000	214507	9.156	1.736	47362.	4.582	1050.8	2.850	3.687	24.92
223000	215440	9.153	1.694	47533.	4.477	1052.6	2.789	3.774	24.89
224000	216374	9.150	1.652	47705.	4.375	1054.3	2.730	3.862	24.86
225000	217306	9.147	1.612	47876.	4.275	1056.0	2.672	3.952	24.83
226000	218239	9.145	1.573	48048.	4.178	1057.8	2.616	4.044	24.80
227000	219171	9.142	1.536	48219.	4.083	1059.5	2.561	4.137	24.77
228000	220104	9.139	1.499	48391.	3.991	1061.2	2.507	4.233	24.75
229000	221035	9.136	1.463	48563.	3.902	1062.9	2.455	4.330	24.72
230000	221967	9.134	1.428 - 9	48735.	3.815 +15	1064.7	2.404 + 0	4.429 + 2	24.69
231000	222898	9.131	1.395	48875.	3.732	1066.0	2.355	4.527	24.66
232000	223829	9.128	1.363	49016.	3.651	1067.4	2.307	4.627	24.63
233000	224760	9.125	1.332	49156.	3.573	1068.8	2.260	4.729	24.60
234000	225690	9.122	1.301	49297.	3.496	1070.1	2.215	4.832	24.57
235000	226620	9.120	1.272	49438.	3.421	1071.5	2.170	4.938	24.54
236000	227550	9.117	1.243	49579.	3.348	1072.9	2.126	5.046	24.51
237000	228479	9.114	1.214	49720.	3.277	1074.2	2.084	5.155	24.49
238000	229409	9.111	1.187	49861.	3.208	1075.6	2.042	5.267	24.46
239000	230338	9.109	1.160	50002.	3.140	1076.9	2.002	5.381	24.43

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{m sec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
240000	231266	9.106	1.134 - 9	50144.	3.074 +15	1078.3	1.962 + 0	5.496 + 2	24.40
241000	232195	9.103	1.108	50285.	3.009	1079.7	1.923	5.614	24.37
242000	233123	9.100	1.084	50426.	2.946	1081.0	1.885	5.735	24.34
243000	234051	9.098	1.059	50568.	2.885	1082.4	1.848	5.857	24.31
244000	234978	9.095	1.036	50709.	2.824	1083.7	1.812	5.982	24.28
245000	235905	9.092	1.013	50851.	2.766	1085.1	1.776	6.108	24.25
246000	236832	9.089	9.902 -10	50993.	2.709	1086.4	1.742	6.238	24.22
247000	237759	9.087	9.683	51135.	2.653	1087.7	1.708	6.369	24.20
248000	238686	9.084	9.470	51277.	2.598	1089.1	1.675	6.503	24.17
249000	239612	9.081	9.262	51419.	2.545	1090.4	1.642	6.639	24.14
250000	240538	9.078	9.058 -10	51561.	2.493 +15	1091.8	1.611 + 0	6.778 + 2	24.11
251000	241463	9.076	8.860	51703.	2.442	1093.1	1.580	6.919	24.08
252000	242389	9.073	8.667	51845.	2.392	1094.4	1.550	7.063	24.05
253000	243314	9.070	8.478	51987.	2.344	1095.8	1.520	7.209	24.02
254000	244238	9.067	8.294	52130.	2.296	1097.1	1.491	7.358	23.99
255000	245163	9.065	8.115	52272.	2.250	1098.4	1.463	7.509	23.96
256000	246087	9.062	7.940	52415.	2.205	1099.8	1.435	7.663	23.93
257000	247011	9.059	7.769	52557.	2.160	1101.1	1.408	7.820	23.91
258000	247934	9.056	7.602	52700.	2.117	1102.4	1.382	7.980	23.88
259000	248858	9.054	7.439	52843.	2.075	1103.8	1.356	8.142	23.85
260000	249781	9.051	7.280 -10	52986.	2.034 +15	1105.1	1.330 + 0	8.307 + 2	23.82
261000	250704	9.048	7.125	53128.	1.993	1106.4	1.305	8.475	23.79
262000	251626	9.045	6.973	53271.	1.954	1107.7	1.281	8.646	23.76
263000	252548	9.043	6.826	53415.	1.916	1109.0	1.257	8.820	23.73
264000	253470	9.040	6.681	53558.	1.878	1110.4	1.234	8.996	23.70
265000	254392	9.037	6.540	53701.	1.841	1111.7	1.211	9.176	23.67
266000	255313	9.034	6.403	53844.	1.805	1113.0	1.189	9.359	23.64
267000	256235	9.032	6.268	53988.	1.770	1114.3	1.167	9.545	23.62
268000	257155	9.029	6.137	54131.	1.736	1115.6	1.146	9.734	23.59
269000	258076	9.026	6.009	54275.	1.702	1116.9	1.125	9.927	23.56
270000	258996	9.024	5.884 -10	54418.	1.669 +15	1118.2	1.105 + 0	1.012 + 3	23.53
271000	259916	9.021	5.762	54562.	1.637	1119.5	1.085	1.032	23.50
272000	260836	9.018	5.642	54706.	1.605	1120.8	1.065	1.052	23.47
273000	261755	9.015	5.526	54850.	1.575	1122.1	1.046	1.073	23.44
274000	262675	9.013	5.412	54994.	1.545	1123.4	1.027	1.094	23.41
275000	263594	9.010	5.301	55138.	1.515	1124.7	1.009	1.115	23.38
276000	264512	9.007	5.192	55282.	1.486	1126.0	9.907 - 1	1.137	23.35
277000	265430	9.004	5.086	55426.	1.458	1127.3	9.731	1.159	23.33
278000	266349	9.002	4.982	55570.	1.431	1128.6	9.558	1.181	23.30
279000	267266	8.999	4.880	55715.	1.404	1129.9	9.389	1.204	23.27
280000	268184	8.996	4.781 -10	55859.	1.377 +15	1131.2	9.223 - 1	1.227 + 3	23.24
281000	269101	8.994	4.684	56004.	1.352	1132.5	9.060	1.250	23.21
282000	270018	8.991	4.590	56148.	1.326	1133.8	8.901	1.274	23.18
283000	270935	8.988	4.497	56293.	1.302	1135.1	8.745	1.298	23.15
284000	271851	8.986	4.407	56438.	1.277	1136.4	8.593	1.323	23.12
285000	272767	8.983	4.318	56583.	1.254	1137.7	8.443	1.347	23.09
286000	273683	8.980	4.232	56727.	1.231	1139.0	8.296	1.373	23.06
287000	274599	8.977	4.148	56872.	1.208	1140.2	8.153	1.399	23.03
288000	275514	8.975	4.065	57018.	1.186	1141.5	8.012	1.425	23.01
289000	276429	8.972	3.984	57163.	1.164	1142.8	7.874	1.451	22.98
290000	277344	8.969	3.905 -10	57308.	1.143 +15	1144.1	7.738 - 1	1.478 + 3	22.95
291000	278258	8.967	3.828	57453.	1.122	1145.4	7.606	1.506	22.92
292000	279172	8.964	3.753	57599.	1.102	1146.6	7.476	1.534	22.89
293000	280086	8.961	3.679	57744.	1.082	1147.9	7.349	1.562	22.86
294000	281000	8.958	3.607	57890.	1.062	1149.2	7.224	1.591	22.83
295000	281913	8.956	3.536	58035.	1.043	1150.5	7.101	1.620	22.80
296000	282826	8.953	3.467	58181.	1.024	1151.7	6.981	1.650	22.77
297000	283739	8.950	3.400	58327.	1.006	1153.0	6.864	1.680	22.75
298000	284652	8.948	3.334	58473.	9.877 +14	1154.3	6.748	1.710	22.72
299000	285564	8.945	3.269	58619.	9.701	1155.5	6.635	1.742	22.69
300000	286476	8.942	3.206 -10	58765.	9.528 +14	1156.8	6.524 - 1	1.773 + 3	22.66
301000	287389	8.937	3.086	59012.	9.201	1158.9	6.311	1.836	22.60
302000	288299	8.932	2.971	59260.	8.886	1161.0	6.106	1.901	22.54
303000	289212	8.926	2.860	59507.	8.583	1163.0	5.908	1.968	22.49
304000	290121	8.921	2.754	59755.	8.291	1165.1	5.718	2.038	22.43
305000	291026	8.916	2.653	60004.	8.011	1167.2	5.534	2.109	22.37
306000	291933	8.910	2.556	60253.	7.741	1169.2	5.358	2.182	22.31
307000	292835	8.905	2.462	60501.	7.482	1171.3	5.187	2.258	22.26
308000	293742	8.899	2.372	60751.	7.232	1173.4	5.023	2.336	22.20
309000	294645	8.894	2.286	61000.	6.992	1175.4	4.865	2.416	22.14
310000	295551	8.889	2.204 -10	61250.	6.761 +14	1177.5	4.712 - 1	2.499 + 3	22.08
311000	296457	8.883	2.124	61500.	6.538	1179.5	4.565	2.584	22.03
312000	297362	8.878	2.048	61750.	6.324	1181.5	4.423	2.671	21.97
313000	298267	8.873	1.975	62001.	6.118	1183.6	4.286	2.762	21.91
314000	299172	8.868	1.905	62251.	5.919	1185.6	4.154	2.854	21.86
315000	300077	8.862	1.837	62502.	5.727	1187.7	4.026	2.950	21.80
316000	300982	8.857	1.772	62754.	5.543	1189.7	3.903	3.048	21.74
317000	301887	8.852	1.710	63005.	5.365	1191.7	3.784	3.149	21.69
318000	302792	8.846	1.650	63257.	5.193	1193.7	3.670	3.253	21.63
319000	303697	8.841	1.593	63509.	5.028	1195.8	3.559	3.360	21.58

TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
340000	322733	8.836	1.537 -10	63762.	4.869 +14	1197.8	3.452 - 1	3.470 + 3	21.52
342000	324534	8.830	1.484	64014.	4.715	1199.8	3.348	3.583	21.46
344000	326335	8.825	1.433	64267.	4.567	1201.8	3.249	3.699	21.41
346000	328134	8.820	1.383	64521.	4.424	1203.8	3.152	3.819	21.35
348000	329932	8.815	1.336	64774.	4.286	1205.8	3.059	3.942	21.30
350000	331729	8.809	1.290	65028.	4.153	1207.8	2.969	4.068	21.24
352000	333525	8.804	1.247	65282.	4.025	1209.8	2.882	4.198	21.19
354000	335320	8.799	1.204	65536.	3.901	1211.8	2.798	4.331	21.13
356000	337114	8.794	1.164	65791.	3.781	1213.8	2.716	4.468	21.08
358000	338907	8.788	1.125	66045.	3.665	1215.8	2.638	4.609	21.03
360000	340699	8.783	1.087 -10	66300.	3.554 +14	1217.7	2.562 - 1	4.754 + 3	20.97
362000	342490	8.778	1.051	66556.	3.446	1219.7	2.488	4.903	20.92
364000	344279	8.773	1.016	66811.	3.342	1221.7	2.417	5.055	20.86
366000	346068	8.768	9.820 -11	67067.	3.242	1223.7	2.348	5.212	20.81
368000	347856	8.762	9.496	67324.	3.144	1225.6	2.281	5.373	20.76
370000	349642	8.757	9.183	67580.	3.051	1227.6	2.217	5.538	20.70
372000	351427	8.752	8.882	67837.	2.960	1229.6	2.154	5.708	20.65
374000	353212	8.747	8.592	68094.	2.872	1231.5	2.094	5.882	20.60
376000	354995	8.741	8.313	68351.	2.787	1233.5	2.035	6.061	20.55
378000	356777	8.736	8.043	68608.	2.706	1235.4	1.978	6.245	20.49
380000	358559	8.731	7.783 -11	68866.	2.626 +14	1237.4	1.924 - 1	6.433 + 3	20.44
382000	360339	8.726	7.533	69124.	2.550	1239.3	1.870	6.626	20.39
384000	362118	8.721	7.291	69382.	2.476	1241.3	1.819	6.825	20.34
386000	363896	8.716	7.058	69641.	2.404	1243.2	1.769	7.028	20.29
388000	365673	8.710	6.833	69900.	2.335	1245.2	1.721	7.237	20.24
390000	367449	8.705	6.616	70159.	2.267	1247.1	1.674	7.451	20.19
392000	369223	8.700	6.407	70418.	2.202	1249.0	1.628	7.671	20.14
394000	370997	8.695	6.205	70678.	2.140	1251.0	1.584	7.896	20.09
396000	372770	8.690	6.010	70938.	2.079	1252.9	1.542	8.127	20.04
398000	374542	8.685	5.822	71198.	2.020	1254.8	1.500	8.364	19.99
400000	376312	8.679	5.640 -11	71459.	1.963 +14	1256.7	1.460 - 1	8.607 + 3	19.94
402000	378082	8.674	5.468	71673.	1.909	1258.2	1.422	8.851	19.89
404000	379850	8.669	5.302	71888.	1.856	1259.8	1.384	9.101	19.84
406000	381618	8.664	5.142	72103.	1.806	1261.3	1.348	9.357	19.79
408000	383384	8.659	4.986	72318.	1.756	1262.8	1.313	9.619	19.75
410000	385150	8.654	4.836	72533.	1.709	1264.3	1.279	9.888	19.70
412000	386914	8.649	4.691	72749.	1.662	1265.8	1.245	1.016 + 4	19.65
414000	388677	8.644	4.550	72964.	1.617	1267.3	1.213	1.045	19.60
416000	390440	8.638	4.414	73180.	1.574	1268.8	1.182	1.074	19.56
418000	392201	8.633	4.283	73396.	1.531	1270.3	1.151	1.103	19.51
420000	393961	8.628	4.156 -11	73613.	1.490 +14	1271.8	1.122 - 1	1.134 + 4	19.47
422000	395720	8.623	4.033	73829.	1.450	1273.3	1.093	1.165	19.42
424000	397478	8.618	3.913	74046.	1.411	1274.8	1.065	1.197	19.38
426000	399235	8.613	3.798	74263.	1.374	1276.2	1.038	1.230	19.33
428000	400991	8.608	3.687	74480.	1.337	1277.7	1.011	1.263	19.29
430000	402746	8.603	3.579	74698.	1.302	1279.2	9.858 - 2	1.298	19.24
432000	404500	8.598	3.474	74916.	1.268	1280.7	9.609	1.333	19.20
434000	406253	8.593	3.373	75133.	1.234	1282.2	9.366	1.369	19.16
436000	408005	8.588	3.275	75352.	1.202	1283.7	9.131	1.406	19.11
438000	409756	8.583	3.180	75570.	1.170	1285.1	8.901	1.444	19.07
440000	411506	8.577	3.088 -11	75789.	1.140 +14	1286.6	8.678 - 2	1.483 + 4	19.03
442000	413255	8.572	2.999	76007.	1.110	1288.1	8.462	1.522	18.99
444000	415002	8.567	2.913	76226.	1.081	1289.6	8.251	1.563	18.94
446000	416749	8.562	2.830	76445.	1.053	1291.0	8.046	1.605	18.90
448000	418495	8.557	2.749	76665.	1.026	1292.5	7.846	1.647	18.86
450000	420240	8.552	2.670	76885.	9.991 +13	1294.0	7.652	1.691	18.82
452000	421983	8.547	2.594	77104.	9.733	1295.5	7.463	1.736	18.78
454000	423726	8.542	2.521	77325.	9.483	1296.9	7.280	1.782	18.74
456000	425467	8.537	2.450	77545.	9.240	1298.4	7.101	1.828	18.70
458000	427208	8.532	2.381	77765.	9.003	1299.8	6.927	1.876	18.66
460000	428948	8.527	2.314 -11	77986.	8.773 +13	1301.3	6.758 - 2	1.926 + 4	18.63
462000	430686	8.522	2.249	78207.	8.550	1302.8	6.593	1.976	18.59
464000	432424	8.517	2.186	78428.	8.333	1304.2	6.433	2.028	18.55
466000	434160	8.512	2.125	78650.	8.121	1305.7	6.276	2.080	18.51
468000	435896	8.507	2.066	78871.	7.916	1307.1	6.124	2.134	18.48
470000	437630	8.502	2.009	79093.	7.716	1308.6	5.976	2.190	18.44
472000	439364	8.497	1.953	79315.	7.522	1310.0	5.832	2.246	18.40
474000	441096	8.492	1.899	79537.	7.333	1311.5	5.692	2.304	18.37
476000	442828	8.487	1.847	79760.	7.149	1312.9	5.556	2.363	18.33
478000	444558	8.482	1.796	79983.	6.970	1314.4	5.423	2.424	18.30
480000	446287	8.477	1.747 -11	80206.	6.796 +13	1315.8	5.293 - 2	2.486 + 4	18.26
482000	448016	8.472	1.699	80429.	6.627	1317.3	5.167	2.549	18.23
484000	449743	8.467	1.653	80652.	6.462	1318.7	5.044	2.614	18.19
486000	451469	8.462	1.608	80876.	6.302	1320.2	4.924	2.681	18.16
488000	453195	8.457	1.565	81100.	6.146	1321.6	4.808	2.749	18.13
490000	454919	8.453	1.522	81324.	5.994	1323.0	4.694	2.819	18.10
492000	456642	8.448	1.481	81548.	5.846	1324.5	4.583	2.890	18.06
494000	458365	8.443	1.441	81772.	5.703	1325.9	4.475	2.963	18.03
496000	460086	8.438	1.403	81997.	5.563	1327.3	4.370	3.037	18.00
498000	461806	8.433	1.365	82222.	5.426	1328.8	4.268	3.113	17.97

TABLE II.—Continued

## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
500000	463526	8.428	1.329 -11	82447.	5.294 +13	1330.2	4.168 - 2	3.191 + 4	17.94
502000	465244	8.423	1.295	82611.	5.169	1331.1	4.072	3.269	17.91
504000	466961	8.418	1.261	82775.	5.046	1332.1	3.979	3.348	17.88
506000	468678	8.413	1.229	82940.	4.927	1333.0	3.888	3.429	17.85
508000	470393	8.408	1.197	83104.	4.811	1333.9	3.799	3.512	17.82
510000	472107	8.403	1.166	83269.	4.698	1334.9	3.712	3.596	17.79
512000	473821	8.398	1.136	83434.	4.587	1335.8	3.627	3.683	17.76
514000	475533	8.394	1.107	83598.	4.480	1336.7	3.544	3.771	17.74
516000	477244	8.389	1.079	83764.	4.375	1337.7	3.464	3.862	17.71
518000	478954	8.384	1.051	83929.	4.272	1338.6	3.385	3.955	17.68
520000	480664	8.379	1.025 -11	84094.	4.172 +13	1339.5	3.308 - 2	4.049 + 4	17.65
522000	482372	8.374	9.987 -12	84260.	4.075	1340.4	3.233	4.146	17.63
524000	484079	8.369	9.734	84425.	3.980	1341.4	3.160	4.245	17.60
526000	485786	8.364	9.487	84591.	3.887	1342.3	3.088	4.347	17.58
528000	487491	8.359	9.248	84757.	3.796	1343.2	3.018	4.450	17.55
530000	489195	8.355	9.015	84923.	3.708	1344.1	2.950	4.556	17.52
532000	490899	8.350	8.788	85089.	3.622	1345.1	2.884	4.664	17.50
534000	492601	8.345	8.567	85256.	3.538	1346.0	2.819	4.775	17.48
536000	494303	8.340	8.352	85422.	3.456	1346.9	2.755	4.888	17.45
538000	496003	8.335	8.143	85589.	3.376	1347.8	2.693	5.004	17.43
540000	497702	8.330	7.940 -12	85756.	3.298 +13	1348.8	2.633 - 2	5.122 + 4	17.40
542000	499401	8.325	7.742	85923.	3.222	1349.7	2.574	5.243	17.38
544000	501098	8.321	7.549	86090.	3.148	1350.6	2.516	5.367	17.36
546000	502795	8.316	7.362	86258.	3.075	1351.5	2.460	5.493	17.34
548000	504490	8.311	7.179	86425.	3.005	1352.4	2.405	5.623	17.31
550000	506185	8.306	7.002	86593.	2.936	1353.4	2.352	5.755	17.29
552000	507878	8.301	6.829	86761.	2.868	1354.3	2.299	5.890	17.27
554000	509571	8.297	6.660	86928.	2.803	1355.2	2.248	6.028	17.25
556000	511262	8.292	6.497	87097.	2.739	1356.1	2.198	6.169	17.23
558000	512953	8.287	6.337	87265.	2.676	1357.0	2.150	6.313	17.21
560000	514642	8.282	6.182 -12	87433.	2.615 +13	1357.9	2.102 - 2	6.460 + 4	17.19
562000	516331	8.277	6.030	87602.	2.556	1358.9	2.055	6.611	17.17
564000	518018	8.273	5.883	87770.	2.497	1359.8	2.010	6.765	17.15
566000	519705	8.268	5.740	87939.	2.441	1360.7	1.966	6.922	17.13
568000	521391	8.263	5.600	88108.	2.385	1361.6	1.922	7.083	17.11
570000	523075	8.258	5.464	88277.	2.331	1362.5	1.880	7.247	17.09
572000	524759	8.253	5.331	88447.	2.278	1363.4	1.839	7.415	17.07
574000	526442	8.249	5.202	88616.	2.227	1364.3	1.798	7.586	17.06
576000	528124	8.244	5.077	88786.	2.177	1365.2	1.759	7.761	17.04
578000	529805	8.239	4.954	88955.	2.128	1366.1	1.721	7.940	17.02
580000	531484	8.234	4.835 -12	89125.	2.080 +13	1367.1	1.683 - 2	8.123 + 4	17.00
582000	533163	8.230	4.719	89295.	2.033	1368.0	1.646	8.310	16.98
584000	534841	8.225	4.605	89466.	1.987	1368.9	1.610	8.501	16.97
586000	536518	8.220	4.495	89636.	1.943	1369.8	1.575	8.696	16.95
588000	538194	8.215	4.388	89806.	1.899	1370.7	1.541	8.895	16.93
590000	539869	8.211	4.283	89977.	1.857	1371.6	1.508	9.098	16.92
592000	541543	8.206	4.181	90148.	1.816	1372.5	1.475	9.306	16.90
594000	543216	8.201	4.082	90319.	1.775	1373.4	1.443	9.518	16.89
596000	544888	8.196	3.985	90490.	1.736	1374.3	1.412	9.734	16.87
598000	546559	8.192	3.890	90661.	1.697	1375.2	1.381	9.956	16.85
600000	548230	8.187	3.798 -12	90833.	1.659 +13	1376.1	1.352 - 2	1.018 + 5	16.84
602000	549899	8.182	3.710	90962.	1.623	1376.7	1.323	1.041	16.82
604000	551567	8.178	3.625	91092.	1.588	1377.3	1.295	1.064	16.81
606000	553234	8.173	3.541	91221.	1.554	1377.9	1.267	1.087	16.79
608000	554901	8.168	3.459	91351.	1.520	1378.5	1.240	1.111	16.78
610000	556566	8.164	3.380	91481.	1.487	1379.0	1.214	1.136	16.76
612000	558230	8.159	3.302	91611.	1.455	1379.6	1.188	1.161	16.75
614000	559894	8.154	3.226	91741.	1.424	1380.2	1.163	1.187	16.74
616000	561556	8.149	3.152	91871.	1.393	1380.8	1.139	1.213	16.72
618000	563218	8.145	3.080	92002.	1.363	1381.4	1.115	1.239	16.71
620000	564879	8.140	3.009 -12	92132.	1.334 +13	1381.9	1.091 - 2	1.267 + 5	16.69
622000	566538	8.135	2.941	92263.	1.305	1382.5	1.068	1.294	16.68
624000	568197	8.131	2.874	92393.	1.277	1383.1	1.046	1.323	16.67
626000	569855	8.126	2.808	92524.	1.250	1383.7	1.024	1.352	16.65
628000	571511	8.121	2.744	92655.	1.223	1384.3	1.002	1.381	16.64
630000	573167	8.117	2.682	92786.	1.197	1384.9	9.811 - 3	1.412	16.63
632000	574822	8.112	2.621	92917.	1.171	1385.4	9.606	1.442	16.61
634000	576476	8.108	2.562	93048.	1.146	1386.0	9.405	1.474	16.60
636000	578129	8.103	2.504	93179.	1.122	1386.6	9.208	1.506	16.59
638000	579781	8.098	2.447	93311.	1.098	1387.2	9.016	1.539	16.57
640000	581432	8.094	2.392 -12	93442.	1.075 +13	1387.8	8.828 - 3	1.572 + 5	16.56
642000	583082	8.089	2.338	93574.	1.052	1388.3	8.645	1.606	16.55
644000	584732	8.084	2.285	93705.	1.030	1388.9	8.465	1.641	16.53
646000	586380	8.080	2.234	93837.	1.008	1389.5	8.290	1.676	16.52
648000	588027	8.075	2.184	93969.	9.866 +12	1390.1	8.118	1.712	16.51
650000	589674	8.070	2.135	94101.	9.658	1390.6	7.950	1.749	16.50
652000	591319	8.066	2.087	94233.	9.455	1391.2	7.786	1.787	16.48
654000	592964	8.061	2.040	94365.	9.256	1391.8	7.625	1.825	16.47
656000	594607	8.057	1.995	94498.	9.061	1392.4	7.468	1.865	16.46
658000	596250	8.052	1.950	94630.	8.871	1393.0	7.314	1.904	16.44



## GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Accel. due to gravity $g, \text{msec}^{-2}$	Specific weight $\omega, \text{kg m}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{m}$	Number density $n, \text{m}^{-3}$	Particle speed $\bar{V}, \text{m sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{m}$	Molecular weight $M$
Z, m	H, m								
660000	597892	8.047	1.907 -12	94762.	8.685 +12	1393.5	7.164 - 3	1.945 + 5	16.43
662000	599532	8.043	1.865	94895.	8.504	1394.1	7.017	1.987	16.42
664000	601172	8.038	1.823	95028.	8.326	1394.7	6.873	2.029	16.41
666000	602811	8.034	1.783	95161.	8.152	1395.3	6.733	2.072	16.39
668000	604449	8.029	1.743	95294.	7.982	1395.8	6.595	2.116	16.38
670000	606086	8.025	1.705	95427.	7.816	1396.4	6.461	2.161	16.37
672000	607722	8.020	1.667	95560.	7.654	1397.0	6.329	2.207	16.35
674000	609357	8.015	1.630	95693.	7.495	1397.6	6.200	2.254	16.34
676000	610991	8.011	1.594	95826.	7.340	1398.1	6.075	2.302	16.33
678000	612625	8.006	1.559	95960.	7.189	1398.7	5.951	2.350	16.32
680000	614257	8.002	1.525 -12	96093.	7.040 +12	1399.3	5.831 - 3	2.400 + 5	16.30
682000	615889	7.997	1.492	96227.	6.895	1399.9	5.713	2.450	16.29
684000	617519	7.993	1.459	96361.	6.753	1400.4	5.598	2.502	16.28
686000	619149	7.988	1.427	96495.	6.615	1401.0	5.485	2.554	16.26
688000	620777	7.984	1.396	96629.	6.479	1401.6	5.375	2.608	16.25
690000	622405	7.979	1.365	96763.	6.347	1402.2	5.267	2.662	16.24
692000	624032	7.974	1.335	96897.	6.217	1402.7	5.162	2.718	16.22
694000	625658	7.970	1.306	97031.	6.090	1403.3	5.058	2.774	16.21
696000	627283	7.965	1.278	97166.	5.966	1403.9	4.958	2.832	16.20
698000	628907	7.961	1.250	97300.	5.845	1404.5	4.859	2.891	16.18
700000	630530	7.956	1.223 -12	97435.	5.726 +12	1405.0	4.762 - 3	2.950 + 5	16.17

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TABLE III  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	$C_s$ , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
-5000	-4996	358.972	1.9421 - 5	1.08536 + 0	1.0060 - 5	6.88727 - 1	6.6540 - 6	1.09928 + 0
-4950	-4946	358.790	1.9406	1.08453	1.0096	6.91175	6.6481	1.09831
-4900	-4896	358.608	1.9391	1.08370	1.0132	6.93635	6.6422	1.09733
-4850	-4846	358.426	1.9377	1.08286	1.0168	6.96106	6.6362	1.09635
-4800	-4796	358.244	1.9362	1.08203	1.0204	6.98588	6.6303	1.09537
-4750	-4746	358.061	1.9347	1.08120	1.0241	7.01081	6.6244	1.09439
-4700	-4697	357.879	1.9332	1.08036	1.0277	7.03586	6.6185	1.09342
-4650	-4647	357.696	1.9317	1.07953	1.0314	7.06102	6.6126	1.09244
-4600	-4597	357.514	1.9302	1.07869	1.0351	7.08629	6.6066	1.09146
-4550	-4547	357.331	1.9287	1.07786	1.0388	7.11168	6.6007	1.09048
-4500	-4497	357.148	1.9272 - 5	1.07702 + 0	1.0425 - 5	7.13718 - 1	6.5948 - 6	1.08950 + 0
-4450	-4446	356.965	1.9257	1.07619	1.0463	7.16280	6.5888	1.08852
-4400	-4397	356.782	1.9242	1.07535	1.0500	7.18854	6.5829	1.08754
-4350	-4347	356.599	1.9227	1.07451	1.0538	7.21439	6.5770	1.08656
-4300	-4297	356.416	1.9212	1.07367	1.0576	7.24037	6.5710	1.08557
-4250	-4247	356.233	1.9197	1.07284	1.0614	7.26646	6.5651	1.08459
-4200	-4197	356.049	1.9182	1.07200	1.0653	7.29267	6.5591	1.08361
-4150	-4147	355.866	1.9167	1.07116	1.0691	7.31900	6.5532	1.08263
-4100	-4097	355.682	1.9152	1.07032	1.0730	7.34546	6.5472	1.08165
-4050	-4047	355.499	1.9137	1.06948	1.0768	7.37203	6.5413	1.08066
-4000	-3997	355.315	1.9122 - 5	1.06864 + 0	1.0807 - 5	7.39873 - 1	6.5353 - 6	1.07968 + 0
-3950	-3948	355.131	1.9107	1.06780	1.0847	7.42555	6.5294	1.07870
-3900	-3898	354.947	1.9092	1.06696	1.0886	7.45249	6.5234	1.07771
-3850	-3848	354.763	1.9077	1.06612	1.0926	7.47956	6.5175	1.07673
-3800	-3798	354.579	1.9062	1.06528	1.0965	7.50675	6.5115	1.07574
-3750	-3748	354.395	1.9047	1.06443	1.1005	7.53407	6.5055	1.07476
-3700	-3698	354.210	1.9032	1.06359	1.1045	7.56151	6.4996	1.07377
-3650	-3648	354.026	1.9017	1.06275	1.1086	7.58909	6.4936	1.07279
-3600	-3598	353.841	1.9002	1.06190	1.1126	7.61679	6.4877	1.07180
-3550	-3548	353.657	1.8986	1.06106	1.1167	7.64461	6.4817	1.07082
-3500	-3498	353.472	1.8971 - 5	1.06022 + 0	1.1207 - 5	7.67257 - 1	6.4757 - 6	1.06983 + 0
-3450	-3448	353.287	1.8956	1.05937	1.1249	7.70066	6.4697	1.06884
-3400	-3398	353.102	1.8941	1.05853	1.1290	7.72888	6.4638	1.06786
-3350	-3348	352.917	1.8926	1.05768	1.1331	7.75723	6.4578	1.06687
-3300	-3298	352.732	1.8911	1.05683	1.1373	7.78571	6.4518	1.06588
-3250	-3248	352.547	1.8896	1.05599	1.1415	7.81433	6.4458	1.06489
-3200	-3198	352.362	1.8880	1.05514	1.1457	7.84307	6.4399	1.06391
-3150	-3148	352.177	1.8865	1.05429	1.1499	7.87196	6.4339	1.06292
-3100	-3098	351.991	1.8850	1.05345	1.1541	7.90098	6.4279	1.06193
-3050	-3049	351.805	1.8835	1.05260	1.1584	7.93013	6.4219	1.06094
-3000	-2999	351.620	1.8820 - 5	1.05175 + 0	1.1626 - 5	7.95942 - 1	6.4159 - 6	1.05995 + 0
-2950	-2949	351.434	1.8805	1.05090	1.1669	7.98885	6.4099	1.05896
-2900	-2899	351.248	1.8789	1.05005	1.1713	8.01842	6.4039	1.05797
-2850	-2849	351.062	1.8774	1.04920	1.1756	8.04812	6.3979	1.05698
-2800	-2799	350.876	1.8759	1.04835	1.1800	8.07797	6.3919	1.05599
-2750	-2749	350.690	1.8744	1.04750	1.1843	8.10796	6.3859	1.05500
-2700	-2699	350.504	1.8728	1.04665	1.1887	8.13809	6.3799	1.05401
-2650	-2649	350.317	1.8713	1.04580	1.1932	8.16836	6.3739	1.05301
-2600	-2599	350.131	1.8698	1.04494	1.1976	8.19877	6.3679	1.05202
-2550	-2549	349.944	1.8683	1.04409	1.2021	8.22933	6.3619	1.05103
-2500	-2499	349.758	1.8667 - 5	1.04324 + 0	1.2066 - 5	8.26003 - 1	6.3559 - 6	1.05004 + 0
-2450	-2449	349.571	1.8652	1.04238	1.2111	8.29088	6.3499	1.04905
-2400	-2399	349.384	1.8637	1.04153	1.2156	8.32188	6.3439	1.04805
-2350	-2349	349.197	1.8622	1.04068	1.2201	8.35302	6.3379	1.04706
-2300	-2299	349.010	1.8606	1.03982	1.2247	8.38431	6.3319	1.04606
-2250	-2249	348.823	1.8591	1.03897	1.2293	8.41575	6.3258	1.04507
-2200	-2199	348.636	1.8576	1.03811	1.2339	8.44734	6.3198	1.04408
-2150	-2149	348.448	1.8560	1.03725	1.2386	8.47909	6.3138	1.04308
-2100	-2099	348.261	1.8545	1.03640	1.2432	8.51098	6.3078	1.04209
-2050	-2049	348.073	1.8530	1.03554	1.2479	8.54302	6.3018	1.04109
-2000	-1999	347.885	1.8514 - 5	1.03468 + 0	1.2526 - 5	8.57522 - 1	6.2957 - 6	1.04009 + 0
-1950	-1949	347.698	1.8499	1.03382	1.2573	8.60757	6.2897	1.03910
-1900	-1899	347.510	1.8484	1.03296	1.2621	8.64008	6.2837	1.03810
-1850	-1849	347.322	1.8468	1.03211	1.2668	8.67275	6.2776	1.03711
-1800	-1799	347.134	1.8453	1.03125	1.2716	8.70557	6.2716	1.03611
-1750	-1750	346.946	1.8438	1.03039	1.2765	8.73855	6.2656	1.03511
-1700	-1700	346.757	1.8422	1.02953	1.2813	8.77169	6.2595	1.03411
-1650	-1650	346.569	1.8407	1.02867	1.2862	8.80498	6.2535	1.03311
-1600	-1600	346.380	1.8391	1.02780	1.2910	8.83844	6.2474	1.03212
-1550	-1550	346.192	1.8376	1.02694	1.2960	8.87207	6.2414	1.03112
-1500	-1500	346.003	1.8360 - 5	1.02608 + 0	1.3009 - 5	8.90585 - 1	6.2353 - 6	1.03012 + 0
-1450	-1450	345.814	1.8345	1.02522	1.3059	8.93980	6.2293	1.02912
-1400	-1400	345.626	1.8330	1.02435	1.3108	8.97391	6.2232	1.02812
-1350	-1350	345.437	1.8314	1.02349	1.3158	9.00818	6.2172	1.02712
-1300	-1300	345.247	1.8299	1.02263	1.3209	9.04263	6.2111	1.02612
-1250	-1250	345.058	1.8283	1.02176	1.3259	9.07724	6.2051	1.02512
-1200	-1200	344.869	1.8268	1.02090	1.3310	9.11202	6.1990	1.02412
-1150	-1150	344.680	1.8252	1.02003	1.3361	9.14697	6.1930	1.02312
-1100	-1100	344.490	1.8237	1.01917	1.3412	9.18209	6.1869	1.02212
-1050	-1050	344.300	1.8221	1.01830	1.3464	9.21738	6.1808	1.02111



Table III  
SOUND SPEED, COEFFICIENT OF VISCOSITY, KINEMATIC VISCOSITY, AND  
THERMAL CONDUCTIVITY

Metric Units

NOTE: A one- or two-digit number (preceded by a plus or minus sign) following the initial entry of each block indicates the power of ten by which that entry and each succeeding entry of that block should be multiplied. A change of power occurring within a block is indicated by a similar notation.

TABLE III  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
-5000	-5004	358.986	1.9422 - 5	1.08543 + 0	1.0058 - 5	6.88534 - 1	6.6545 - 6	1.09936 + 0
-4950	-4954	358.804	1.9407	1.08459	1.0093	6.90986	6.6485	1.09838
-4900	-4904	358.622	1.9393	1.08376	1.0129	6.93449	6.6426	1.09740
-4850	-4854	358.439	1.9378	1.08293	1.0165	6.95922	6.6367	1.09642
-4800	-4804	358.257	1.9363	1.08209	1.0202	6.98407	6.6308	1.09544
-4750	-4754	358.074	1.9348	1.08126	1.0238	7.00904	6.6248	1.09446
-4700	-4703	357.891	1.9333	1.08042	1.0275	7.03411	6.6189	1.09348
-4650	-4653	357.709	1.9318	1.07958	1.0312	7.05930	6.6130	1.09250
-4600	-4603	357.526	1.9303	1.07875	1.0349	7.08460	6.6070	1.09152
-4550	-4553	357.343	1.9288	1.07791	1.0386	7.11002	6.6011	1.09054
-4500	-4503	357.160	1.9273 - 5	1.07708 + 0	1.0423 - 5	7.13555 - 1	6.5951 - 6	1.08956 + 0
-4450	-4453	356.977	1.9258	1.07624	1.0461	7.16120	6.5892	1.08858
-4400	-4403	356.793	1.9243	1.07540	1.0498	7.18697	6.5833	1.08760
-4350	-4353	356.610	1.9228	1.07456	1.0536	7.21285	6.5773	1.08661
-4300	-4303	356.427	1.9213	1.07372	1.0574	7.23885	6.5714	1.08563
-4250	-4253	356.243	1.9198	1.07288	1.0612	7.26497	6.5654	1.08465
-4200	-4203	356.059	1.9183	1.07204	1.0650	7.29121	6.5595	1.08366
-4150	-4153	355.876	1.9168	1.07120	1.0689	7.31757	6.5535	1.08268
-4100	-4103	355.692	1.9153	1.07036	1.0728	7.34405	6.5475	1.08170
-4050	-4053	355.508	1.9138	1.06952	1.0766	7.37066	6.5416	1.08071
-4000	-4003	355.324	1.9123 - 5	1.06868 + 0	1.0806 - 5	7.39738 - 1	6.5356 - 6	1.07973 + 0
-3950	-3952	355.140	1.9108	1.06784	1.0845	7.42423	6.5297	1.07874
-3900	-3902	354.956	1.9093	1.06700	1.0884	7.45120	6.5237	1.07776
-3850	-3852	354.772	1.9078	1.06616	1.0924	7.47829	6.5177	1.07677
-3800	-3802	354.587	1.9063	1.06531	1.0963	7.50551	6.5118	1.07579
-3750	-3752	354.403	1.9047	1.06447	1.1003	7.53286	6.5058	1.07480
-3700	-3702	354.218	1.9032	1.06363	1.1044	7.56033	6.4998	1.07382
-3650	-3652	354.034	1.9017	1.06278	1.1084	7.58793	6.4939	1.07283
-3600	-3602	353.849	1.9002	1.06194	1.1124	7.61565	6.4879	1.07184
-3550	-3552	353.664	1.8987	1.06109	1.1165	7.64351	6.4819	1.07086
-3500	-3502	353.479	1.8972 - 5	1.06025 + 0	1.1206 - 5	7.67149 - 1	6.4759 - 6	1.06987 + 0
-3450	-3452	353.294	1.8957	1.05940	1.1247	7.69960	6.4700	1.06888
-3400	-3402	353.109	1.8942	1.05856	1.1288	7.72785	6.4640	1.06789
-3350	-3352	352.924	1.8926	1.05771	1.1330	7.75622	6.4580	1.06690
-3300	-3302	352.739	1.8911	1.05686	1.1371	7.78473	6.4520	1.06592
-3250	-3252	352.553	1.8896	1.05602	1.1413	7.81337	6.4460	1.06493
-3200	-3202	352.368	1.8881	1.05517	1.1455	7.84214	6.4400	1.06394
-3150	-3152	352.182	1.8866	1.05432	1.1497	7.87105	6.4341	1.06295
-3100	-3102	351.997	1.8851	1.05347	1.1540	7.90010	6.4281	1.06196
-3050	-3051	351.811	1.8835	1.05262	1.1582	7.92927	6.4221	1.06097
-3000	-3001	351.625	1.8820 - 5	1.05177 + 0	1.1625 - 5	7.95859 - 1	6.4161 - 6	1.05998 + 0
-2950	-2951	351.439	1.8805	1.05092	1.1668	7.98804	6.4101	1.05899
-2900	-2901	351.253	1.8790	1.05007	1.1712	8.01763	6.4041	1.05800
-2850	-2851	351.067	1.8775	1.04922	1.1755	8.04736	6.3981	1.05701
-2800	-2801	350.881	1.8759	1.04837	1.1799	8.07723	6.3921	1.05601
-2750	-2751	350.694	1.8744	1.04752	1.1842	8.10724	6.3861	1.05502
-2700	-2701	350.508	1.8729	1.04667	1.1886	8.13739	6.3801	1.05403
-2650	-2651	350.321	1.8714	1.04581	1.1931	8.16769	6.3741	1.05304
-2600	-2601	350.135	1.8698	1.04496	1.1975	8.19812	6.3681	1.05204
-2550	-2551	349.948	1.8683	1.04411	1.2020	8.22870	6.3620	1.05105
-2500	-2501	349.761	1.8668 - 5	1.04325 + 0	1.2065 - 5	8.25943 - 1	6.3560 - 6	1.05006 + 0
-2450	-2451	349.574	1.8652	1.04240	1.2110	8.29030	6.3500	1.04906
-2400	-2401	349.387	1.8637	1.04155	1.2155	8.32132	6.3440	1.04807
-2350	-2351	349.200	1.8622	1.04069	1.2201	8.35248	6.3380	1.04708
-2300	-2301	349.013	1.8607	1.03983	1.2246	8.38379	6.3320	1.04608
-2250	-2251	348.826	1.8591	1.03898	1.2292	8.41525	6.3259	1.04509
-2200	-2201	348.638	1.8576	1.03812	1.2338	8.44686	6.3199	1.04409
-2150	-2151	348.451	1.8561	1.03727	1.2385	8.47862	6.3139	1.04310
-2100	-2101	348.263	1.8545	1.03641	1.2432	8.51053	6.3079	1.04210
-2050	-2051	348.076	1.8530	1.03555	1.2478	8.54260	6.3018	1.04110
-2000	-2001	347.888	1.8515 - 5	1.03469 + 0	1.2525 - 5	8.57481 - 1	6.2958 - 6	1.04011 + 0
-1950	-1951	347.700	1.8499	1.03383	1.2573	8.60719	6.2898	1.03911
-1900	-1901	347.512	1.8484	1.03297	1.2620	8.63971	6.2837	1.03811
-1850	-1851	347.324	1.8468	1.03212	1.2668	8.67239	6.2777	1.03712
-1800	-1801	347.136	1.8453	1.03126	1.2716	8.70523	6.2717	1.03612
-1750	-1750	346.947	1.8438	1.03039	1.2764	8.73823	6.2656	1.03512
-1700	-1700	346.759	1.8422	1.02953	1.2813	8.77138	6.2596	1.03412
-1650	-1650	346.571	1.8407	1.02867	1.2861	8.80470	6.2535	1.03312
-1600	-1600	346.382	1.8391	1.02781	1.2910	8.83817	6.2475	1.03212
-1550	-1550	346.193	1.8376	1.02695	1.2959	8.87181	6.2414	1.03113
-1500	-1500	346.005	1.8361 - 5	1.02609 + 0	1.3009 - 5	8.90561 - 1	6.2354 - 6	1.03013 + 0
-1450	-1450	345.816	1.8345	1.02522	1.3058	8.93957	6.2293	1.02913
-1400	-1400	345.627	1.8330	1.02436	1.3108	8.97370	6.2233	1.02813
-1350	-1350	345.438	1.8314	1.02350	1.3158	9.00799	6.2172	1.02713
-1300	-1300	345.248	1.8299	1.02263	1.3208	9.04244	6.2112	1.02613
-1250	-1250	345.059	1.8283	1.02177	1.3259	9.07707	6.2051	1.02512
-1200	-1200	344.870	1.8268	1.02090	1.3310	9.11186	6.1990	1.02412
-1150	-1150	344.680	1.8252	1.02004	1.3361	9.14682	6.1930	1.02312
-1100	-1100	344.491	1.8237	1.01917	1.3412	9.18195	6.1869	1.02212
-1050	-1050	344.301	1.8221	1.01830	1.3464	9.21726	6.1809	1.02112

TABLE III. — Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	C <sub>s</sub> , m sec <sup>-1</sup>	μ, kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	η, m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k·cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
-1000	-1000	344.111	1.8206 - 5	1.01743 + 0	1.3516 - 5	9.25284 - 1	6.1748 - 6	1.02011 + 0
-950	-950	343.921	1.8190	1.01657	1.3568	9.28848	6.1687	1.01911
-900	-900	343.731	1.8175	1.01570	1.3620	9.32429	6.1626	1.01811
-850	-850	343.541	1.8159	1.01483	1.3673	9.36028	6.1566	1.01710
-800	-800	343.351	1.8144	1.01396	1.3726	9.39644	6.1505	1.01610
-750	-750	343.160	1.8128	1.01309	1.3779	9.43279	6.1444	1.01510
-700	-700	342.970	1.8113	1.01222	1.3832	9.46931	6.1383	1.01409
-650	-650	342.780	1.8097	1.01135	1.3886	9.50601	6.1322	1.01309
-600	-600	342.589	1.8081	1.01048	1.3939	9.54289	6.1262	1.01208
-550	-550	342.398	1.8066	1.00961	1.3994	9.57995	6.1201	1.01108
-500	-500	342.208	1.8050 - 5	1.00874 + 0	1.4048 - 5	9.61720 - 1	6.1140 - 6	1.01007 + 0
-450	-450	342.017	1.8035	1.00787	1.4103	9.65463	6.1079	1.00907
-400	-400	341.826	1.8019	1.00700	1.4158	9.69225	6.1018	1.00806
-350	-350	341.635	1.8003	1.00612	1.4213	9.73005	6.0957	1.00705
-300	-300	341.443	1.7988	1.00525	1.4268	9.76804	6.0896	1.00605
-250	-250	341.252	1.7972	1.00438	1.4324	9.80622	6.0835	1.00504
-200	-200	341.061	1.7956	1.00350	1.4380	9.84459	6.0774	1.00403
-150	-150	340.869	1.7941	1.00263	1.4437	9.88315	6.0713	1.00303
-100	-100	340.678	1.7925	1.00175	1.4493	9.92190	6.0652	1.00202
-50	-50	340.486	1.7909	1.00088	1.4550	9.96085	6.0591	1.00101
0	0	340.294	1.7894 - 5	1.00000 + 0	1.4607 - 5	1.00000 + 0	6.0530 - 6	1.00000 + 0
50	50	340.102	1.7878	9.99124 - 1	1.4665	1.00393 + 0	6.0469	9.98991 - 1
100	100	339.910	1.7862	9.98246	1.4722	1.00789	6.0408	9.97982
150	150	339.718	1.7847	9.97369	1.4780	1.01186	6.0347	9.96972
200	200	339.525	1.7831	9.96491	1.4839	1.01585	6.0286	9.95963
250	250	339.333	1.7815	9.95612	1.4897	1.01986	6.0225	9.94952
300	300	339.141	1.7800	9.94733	1.4956	1.02390	6.0164	9.93942
350	350	338.948	1.7784	9.93854	1.5015	1.02795	6.0102	9.92931
400	400	338.755	1.7768	9.92974	1.5075	1.03203	6.0041	9.91920
450	450	338.562	1.7752	9.92093	1.5135	1.03612	5.9980	9.90908
500	500	338.369	1.7737 - 5	9.91213 - 1	1.5195 - 5	1.04024 + 0	5.9919 - 6	9.89896 - 1
550	550	338.176	1.7721	9.90331	1.5255	1.04437	5.9857	9.88884
600	600	337.983	1.7705	9.89449	1.5316	1.04853	5.9796	9.87872
650	650	337.790	1.7689	9.88567	1.5377	1.05271	5.9735	9.86859
700	700	337.597	1.7673	9.87684	1.5438	1.05690	5.9674	9.85846
750	750	337.403	1.7658	9.86801	1.5500	1.06113	5.9612	9.84832
800	800	337.209	1.7642	9.85917	1.5562	1.06537	5.9551	9.83818
850	850	337.016	1.7626	9.85033	1.5624	1.06963	5.9489	9.82804
900	900	336.822	1.7610	9.84148	1.5687	1.07392	5.9428	9.81790
950	950	336.628	1.7594	9.83263	1.5750	1.07822	5.9367	9.80775
1000	1000	336.434	1.7578 - 5	9.82377 - 1	1.5813 - 5	1.08255 + 0	5.9305 - 6	9.79760 - 1
1050	1050	336.240	1.7563	9.81491	1.5877	1.08690	5.9244	9.78745
1100	1100	336.045	1.7547	9.80604	1.5940	1.09128	5.9182	9.77729
1150	1150	335.851	1.7531	9.79717	1.6005	1.09567	5.9121	9.76713
1200	1200	335.657	1.7515	9.78829	1.6069	1.10009	5.9059	9.75696
1250	1250	335.462	1.7499	9.77941	1.6134	1.10453	5.8998	9.74680
1300	1300	335.267	1.7483	9.77052	1.6199	1.10899	5.8936	9.73663
1350	1350	335.072	1.7467	9.76163	1.6265	1.11348	5.8875	9.72645
1400	1400	334.877	1.7451	9.75273	1.6331	1.11799	5.8813	9.71628
1450	1450	334.682	1.7435	9.74383	1.6397	1.12252	5.8751	9.70610
1500	1500	334.487	1.7419 - 5	9.73492 - 1	1.6463 - 5	1.12708 + 0	5.8690 - 6	9.69591 - 1
1550	1550	334.292	1.7404	9.72601	1.6530	1.13166	5.8628	9.68573
1600	1600	334.096	1.7388	9.71709	1.6598	1.13626	5.8566	9.67554
1650	1650	333.901	1.7372	9.70817	1.6665	1.14089	5.8505	9.66534
1700	1700	333.705	1.7356	9.69925	1.6733	1.14554	5.8443	9.65515
1750	1750	333.510	1.7340	9.69032	1.6801	1.15022	5.8381	9.64495
1800	1801	333.314	1.7324	9.68138	1.6870	1.15492	5.8319	9.63474
1850	1851	333.118	1.7308	9.67244	1.6939	1.15964	5.8258	9.62454
1900	1901	332.922	1.7292	9.66349	1.7008	1.16439	5.8196	9.61433
1950	1951	332.725	1.7276	9.65454	1.7078	1.16917	5.8134	9.60412
2000	2001	332.529	1.7260 - 5	9.64558 - 1	1.7148 - 5	1.17396 + 0	5.8072 - 6	9.59390 - 1
2050	2051	332.333	1.7244	9.63662	1.7219	1.17879	5.8010	9.58368
2100	2101	332.136	1.7228	9.62766	1.7290	1.18364	5.7948	9.57346
2150	2151	331.939	1.7211	9.61868	1.7361	1.18851	5.7887	9.56323
2200	2201	331.743	1.7195	9.60971	1.7432	1.19341	5.7825	9.55300
2250	2251	331.546	1.7179	9.60073	1.7504	1.19834	5.7763	9.54277
2300	2301	331.349	1.7163	9.59174	1.7577	1.20329	5.7701	9.53253
2350	2351	331.152	1.7147	9.58275	1.7649	1.20826	5.7639	9.52230
2400	2401	330.954	1.7131	9.57375	1.7722	1.21327	5.7577	9.51205
2450	2451	330.757	1.7115	9.56475	1.7796	1.21830	5.7515	9.50181
2500	2501	330.559	1.7099 - 5	9.55574 - 1	1.7870 - 5	1.22335 + 0	5.7453 - 6	9.49156 - 1
2550	2551	330.362	1.7083	9.54673	1.7944	1.22844	5.7391	9.48131
2600	2601	330.164	1.7067	9.53771	1.8019	1.23355	5.7329	9.47105
2650	2651	329.966	1.7050	9.52869	1.8094	1.23868	5.7266	9.46079
2700	2701	329.768	1.7034	9.51966	1.8169	1.24385	5.7204	9.45053
2750	2751	329.570	1.7018	9.51063	1.8245	1.24904	5.7142	9.44027
2800	2801	329.372	1.7002	9.50159	1.8321	1.25426	5.7080	9.43000
2850	2851	329.174	1.6986	9.49255	1.8398	1.25951	5.7018	9.41973
2900	2901	328.975	1.6970	9.48350	1.8475	1.26478	5.6956	9.40945
2950	2951	328.777	1.6953	9.47445	1.8552	1.27009	5.6893	9.39917

TABLE III. — Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	μ, kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	η, m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
-1000	-1000	344.111	1.8206 - 5	1.01744 + 0	1.3516 - 5	9.25273 - 1	6.1748 - 6	1.02011 + 0
-950	-950	343.921	1.8190	1.01657	1.3568	9.28838	6.1687	1.01911
-900	-900	343.731	1.8175	1.01570	1.3620	9.32420	6.1626	1.01811
-850	-850	343.541	1.8159	1.01483	1.3673	9.36020	6.1566	1.01711
-800	-800	343.351	1.8144	1.01396	1.3725	9.39637	6.1505	1.01610
-750	-750	343.161	1.8128	1.01309	1.3779	9.43272	6.1444	1.01510
-700	-700	342.970	1.8113	1.01222	1.3832	9.46925	6.1383	1.01409
-650	-650	342.780	1.8097	1.01135	1.3886	9.50596	6.1323	1.01309
-600	-600	342.589	1.8081	1.01048	1.3939	9.54285	6.1262	1.01208
-550	-550	342.399	1.8066	1.00961	1.3994	9.57992	6.1201	1.01108
-500	-500	342.208	1.8050 - 5	1.00874 + 0	1.4048 - 5	9.61717 - 1	6.1140 - 6	1.01007 + 0
-450	-450	342.017	1.8035	1.00787	1.4103	9.65461	6.1079	1.00907
-400	-400	341.826	1.8019	1.00700	1.4158	9.69223	6.1018	1.00806
-350	-350	341.635	1.8003	1.00612	1.4213	9.73004	6.0957	1.00705
-300	-300	341.443	1.7988	1.00525	1.4268	9.76803	6.0896	1.00605
-250	-250	341.252	1.7972	1.00438	1.4324	9.80622	6.0835	1.00504
-200	-200	341.061	1.7956	1.00350	1.4380	9.84459	6.0774	1.00403
-150	-150	340.869	1.7941	1.00263	1.4437	9.88315	6.0713	1.00303
-100	-100	340.678	1.7925	1.00175	1.4493	9.92190	6.0652	1.00202
-50	-50	340.486	1.7909	1.00088	1.4550	9.96085	6.0591	1.00101
0	0	340.294	1.7894 - 5	1.00000 + 0	1.4607 - 5	1.00000 + 0	6.0530 - 6	1.00000 + 0
50	50	340.102	1.7878	9.99124 - 1	1.4665	1.00393 + 0	6.0469	9.98991 - 1
100	100	339.910	1.7862	9.98246	1.4722	1.00789	6.0408	9.97982
150	150	339.718	1.7847	9.97369	1.4780	1.01186	6.0347	9.96973
200	200	339.525	1.7831	9.96491	1.4839	1.01585	6.0286	9.95963
250	250	339.333	1.7815	9.95612	1.4897	1.01986	6.0225	9.94952
300	300	339.141	1.7800	9.94734	1.4956	1.02390	6.0164	9.93942
350	350	338.948	1.7784	9.93854	1.5015	1.02795	6.0102	9.92931
400	400	338.755	1.7768	9.92974	1.5075	1.03202	6.0041	9.91920
450	450	338.562	1.7752	9.92094	1.5135	1.03612	5.9980	9.90909
500	500	338.370	1.7737 - 5	9.91213 - 1	1.5195 - 5	1.04023 + 0	5.9919 - 6	9.89897 - 1
550	550	338.177	1.7721	9.90332	1.5255	1.04437	5.9858	9.88885
600	600	337.983	1.7705	9.89450	1.5316	1.04852	5.9796	9.87873
650	650	337.790	1.7689	9.88568	1.5377	1.05270	5.9735	9.86860
700	700	337.597	1.7673	9.87685	1.5438	1.05690	5.9674	9.85847
750	750	337.403	1.7658	9.86802	1.5500	1.06112	5.9612	9.84834
800	800	337.210	1.7642	9.85919	1.5562	1.06536	5.9551	9.83820
850	850	337.016	1.7626	9.85035	1.5624	1.06962	5.9490	9.82807
900	900	336.822	1.7610	9.84150	1.5687	1.07390	5.9428	9.81792
950	950	336.629	1.7594	9.83265	1.5750	1.07821	5.9367	9.80778
1000	1000	336.435	1.7579 - 5	9.82380 - 1	1.5813 - 5	1.08254 + 0	5.9305 - 6	9.79763 - 1
1050	1050	336.240	1.7563	9.81494	1.5876	1.08689	5.9244	9.78748
1100	1100	336.046	1.7547	9.80607	1.5940	1.09126	5.9182	9.77733
1150	1150	335.852	1.7531	9.79720	1.6004	1.09565	5.9121	9.76717
1200	1200	335.657	1.7515	9.78833	1.6069	1.10007	5.9059	9.75701
1250	1250	335.463	1.7499	9.77945	1.6134	1.10451	5.8998	9.74685
1300	1300	335.268	1.7483	9.77057	1.6199	1.10897	5.8936	9.73668
1350	1350	335.074	1.7467	9.76168	1.6264	1.11346	5.8875	9.72651
1400	1400	334.879	1.7451	9.75279	1.6330	1.11796	5.8813	9.71634
1450	1450	334.684	1.7436	9.74389	1.6396	1.12249	5.8752	9.70616
1500	1500	334.489	1.7420 - 5	9.73499 - 1	1.6463 - 5	1.12705 + 0	5.8690 - 6	9.69598 - 1
1550	1550	334.293	1.7404	9.72608	1.6530	1.13163	5.8628	9.68580
1600	1600	334.098	1.7388	9.71717	1.6597	1.13623	5.8567	9.67562
1650	1650	333.903	1.7372	9.70825	1.6665	1.14085	5.8505	9.66543
1700	1700	333.707	1.7356	9.69933	1.6733	1.14550	5.8443	9.65524
1750	1750	333.511	1.7340	9.69040	1.6801	1.15017	5.8382	9.64504
1800	1799	333.316	1.7324	9.68147	1.6869	1.15487	5.8320	9.63485
1850	1849	333.120	1.7308	9.67253	1.6938	1.15959	5.8258	9.62465
1900	1899	332.924	1.7292	9.66359	1.7008	1.16434	5.8197	9.61444
1950	1949	332.728	1.7276	9.65465	1.7077	1.16911	5.8135	9.60424
2000	1999	332.532	1.7260 - 5	9.64570 - 1	1.7147 - 5	1.17390 + 0	5.8073 - 6	9.59403 - 1
2050	2049	332.335	1.7244	9.63674	1.7218	1.17872	5.8011	9.58382
2100	2099	332.139	1.7228	9.62778	1.7289	1.18357	5.7949	9.57360
2150	2149	331.942	1.7212	9.61881	1.7360	1.18844	5.7887	9.56338
2200	2199	331.746	1.7196	9.60984	1.7431	1.19334	5.7826	9.55316
2250	2249	331.549	1.7180	9.60087	1.7503	1.19826	5.7764	9.54293
2300	2299	331.352	1.7164	9.59189	1.7575	1.20320	5.7702	9.53270
2350	2349	331.155	1.7147	9.58290	1.7648	1.20818	5.7640	9.52247
2400	2399	330.958	1.7131	9.57391	1.7721	1.21318	5.7578	9.51224
2450	2449	330.761	1.7115	9.56492	1.7795	1.21820	5.7516	9.50200
2500	2499	330.563	1.7099 - 5	9.55592 - 1	1.7868 - 5	1.22325 + 0	5.7454 - 6	9.49176 - 1
2550	2549	330.366	1.7083	9.54692	1.7943	1.22833	5.7392	9.48152
2600	2599	330.168	1.7067	9.53791	1.8017	1.23344	5.7330	9.47127
2650	2649	329.971	1.7051	9.52889	1.8092	1.23857	5.7268	9.46102
2700	2699	329.773	1.7035	9.51987	1.8167	1.24373	5.7206	9.45077
2750	2749	329.575	1.7019	9.51085	1.8242	1.24892	5.7144	9.44051
2800	2799	329.377	1.7002	9.50182	1.8319	1.25413	5.7082	9.43025
2850	2849	329.179	1.6986	9.49278	1.8396	1.25937	5.7019	9.41999
2900	2899	328.980	1.6970	9.48374	1.8473	1.26464	5.6957	9.40972
2950	2949	328.782	1.6954	9.47470	1.8550	1.26994	5.6895	9.39946



TABLE III. — Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
3000	3001	328.578	1.6937 - 5	9.46539 - 1	1.8630 - 5	1.27542 + 0	5.6831 - 6	9.38889 - 1
3050	3051	328.379	1.6921	9.45633	1.8709	1.28078	5.6769	9.37861
3100	3102	328.180	1.6905	9.44726	1.8787	1.28617	5.6707	9.36832
3150	3152	327.981	1.6889	9.43819	1.8866	1.29158	5.6644	9.35803
3200	3202	327.782	1.6872	9.42911	1.8946	1.29703	5.6582	9.34773
3250	3252	327.583	1.6856	9.42003	1.9026	1.30251	5.6520	9.33744
3300	3302	327.383	1.6840	9.41094	1.9106	1.30801	5.6457	9.32714
3350	3352	327.184	1.6823	9.40184	1.9187	1.31355	5.6395	9.31683
3400	3402	326.984	1.6807	9.39274	1.9269	1.31911	5.6333	9.30652
3450	3452	326.784	1.6791	9.38364	1.9350	1.32471	5.6270	9.29621
3500	3502	326.584	1.6775 - 5	9.37453 - 1	1.9432 - 5	1.33033 + 0	5.6208 - 6	9.28590 - 1
3550	3552	326.384	1.6758	9.36542	1.9515	1.33599	5.6145	9.27558
3600	3602	326.184	1.6742	9.35630	1.9598	1.34167	5.6083	9.26526
3650	3652	325.984	1.6726	9.34717	1.9682	1.34739	5.6020	9.25494
3700	3702	325.784	1.6709	9.33804	1.9766	1.35314	5.5958	9.24461
3750	3752	325.583	1.6693	9.32890	1.9850	1.35891	5.5895	9.23428
3800	3802	325.382	1.6677	9.31976	1.9935	1.36472	5.5833	9.22394
3850	3852	325.182	1.6660	9.31062	2.0020	1.37057	5.5770	9.21361
3900	3902	324.981	1.6644	9.30146	2.0106	1.37644	5.5708	9.20327
3950	3952	324.780	1.6627	9.29231	2.0192	1.38235	5.5645	9.19292
4000	4003	324.579	1.6611 - 5	9.28315 - 1	2.0279 - 5	1.38828 + 0	5.5582 - 6	9.18258 - 1
4050	4053	324.377	1.6595	9.27398	2.0366	1.39425	5.5520	9.17223
4100	4103	324.176	1.6578	9.26481	2.0454	1.40026	5.5457	9.16187
4150	4153	323.974	1.6562	9.25563	2.0542	1.40629	5.5394	9.15151
4200	4203	323.773	1.6545	9.24644	2.0631	1.41236	5.5332	9.14115
4250	4253	323.571	1.6529	9.23726	2.0720	1.41847	5.5269	9.13079
4300	4303	323.369	1.6513	9.22806	2.0809	1.42460	5.5206	9.12042
4350	4353	323.167	1.6496	9.21886	2.0900	1.43077	5.5143	9.11005
4400	4403	322.965	1.6480	9.20966	2.0990	1.43698	5.5081	9.09968
4450	4453	322.763	1.6463	9.20045	2.1081	1.44321	5.5018	9.08930
4500	4503	322.560	1.6447 - 5	9.19123 - 1	2.1173 - 5	1.44949 + 0	5.4955 - 6	9.07892 - 1
4550	4553	322.358	1.6430	9.18201	2.1265	1.45580	5.4892	9.06854
4600	4603	322.155	1.6414	9.17278	2.1358	1.46214	5.4829	9.05815
4650	4653	321.952	1.6397	9.16355	2.1451	1.46852	5.4766	9.04776
4700	4703	321.749	1.6381	9.15432	2.1545	1.47493	5.4703	9.03737
4750	4754	321.546	1.6364	9.14507	2.1639	1.48138	5.4641	9.02697
4800	4804	321.343	1.6347	9.13583	2.1733	1.48786	5.4578	9.01657
4850	4854	321.140	1.6331	9.12657	2.1829	1.49438	5.4515	9.00617
4900	4904	320.937	1.6314	9.11731	2.1925	1.50094	5.4452	8.99576
4950	4954	320.733	1.6298	9.10805	2.2021	1.50753	5.4389	8.98536
5000	5004	320.529	1.6281 - 5	9.09878 - 1	2.2118 - 5	1.51416 + 0	5.4326 - 6	8.97494 - 1
5050	5054	320.326	1.6265	9.08951	2.2215	1.52083	5.4263	8.96453
5100	5104	320.122	1.6248	9.08023	2.2313	1.52754	5.4199	8.95411
5150	5154	319.918	1.6231	9.07094	2.2412	1.53428	5.4136	8.94368
5200	5204	319.713	1.6215	9.06165	2.2511	1.54106	5.4073	8.93326
5250	5254	319.509	1.6198	9.05235	2.2610	1.54788	5.4010	8.92283
5300	5304	319.305	1.6181	9.04305	2.2710	1.55474	5.3947	8.91240
5350	5355	319.100	1.6165	9.03374	2.2811	1.56163	5.3884	8.90196
5400	5405	318.895	1.6148	9.02443	2.2912	1.56857	5.3821	8.89152
5450	5455	318.690	1.6131	9.01511	2.3014	1.57554	5.3757	8.88108
5500	5505	318.485	1.6115 - 5	9.00579 - 1	2.3117 - 5	1.58256 + 0	5.3694 - 6	8.87063 - 1
5550	5555	318.280	1.6098	8.99646	2.3220	1.58961	5.3631	8.86018
5600	5605	318.075	1.6081	8.98712	2.3323	1.59670	5.3568	8.84973
5650	5655	317.870	1.6065	8.97778	2.3428	1.60384	5.3504	8.83927
5700	5705	317.664	1.6048	8.96844	2.3532	1.61101	5.3441	8.82881
5750	5755	317.459	1.6031	8.95908	2.3638	1.61823	5.3378	8.81835
5800	5805	317.253	1.6014	8.94973	2.3744	1.62548	5.3314	8.80789
5850	5855	317.047	1.5998	8.94036	2.3850	1.63278	5.3251	8.79742
5900	5905	316.841	1.5981	8.93100	2.3958	1.64012	5.3188	8.78694
5950	5956	316.635	1.5964	8.92162	2.4065	1.64750	5.3124	8.77647
6000	6006	316.428	1.5947 - 5	8.91224 - 1	2.4174 - 5	1.65492 + 0	5.3061 - 6	8.76599 - 1
6050	6056	316.222	1.5931	8.90286	2.4283	1.66239	5.2997	8.75551
6100	6106	316.015	1.5914	8.89347	2.4393	1.66990	5.2934	8.74502
6150	6156	315.809	1.5897	8.88407	2.4503	1.67745	5.2870	8.73453
6200	6206	315.602	1.5880	8.87467	2.4614	1.68505	5.2807	8.72404
6250	6256	315.395	1.5863	8.86526	2.4725	1.69269	5.2743	8.71355
6300	6306	315.188	1.5846	8.85585	2.4838	1.70037	5.2680	8.70305
6350	6356	314.980	1.5830	8.84643	2.4951	1.70810	5.2616	8.69255
6400	6406	314.773	1.5813	8.83700	2.5064	1.71588	5.2553	8.68204
6450	6457	314.565	1.5796	8.82757	2.5178	1.72369	5.2489	8.67153
6500	6507	314.358	1.5779 - 5	8.81814 - 1	2.5293 - 5	1.73156 + 0	5.2425 - 6	8.66102 - 1
6550	6557	314.150	1.5762	8.80870	2.5409	1.73947	5.2362	8.65050
6600	6607	313.942	1.5745	8.79925	2.5525	1.74742	5.2298	8.63999
6650	6657	313.734	1.5728	8.78980	2.5642	1.75542	5.2234	8.62946
6700	6707	313.526	1.5711	8.78034	2.5759	1.76347	5.2171	8.61894
6750	6757	313.317	1.5694	8.77087	2.5878	1.77157	5.2107	8.60841
6800	6807	313.109	1.5677	8.76140	2.5997	1.77971	5.2043	8.59788
6850	6857	312.900	1.5661	8.75193	2.6116	1.78790	5.1979	8.58734
6900	6907	312.691	1.5644	8.74245	2.6237	1.79614	5.1916	8.57680
6950	6958	312.482	1.5627	8.73296	2.6358	1.80443	5.1852	8.56626

TABLE III. - Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	μ, kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	η, m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k·cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
3000	2999	328.583	1.6938 - 5	9.46565 - 1	1.8628 - 5	1.27527 + 0	5.6833 - 6	9.38918 - 1
3050	3049	328.385	1.6921	9.45660	1.8706	1.28062	5.6771	9.37891
3100	3098	328.186	1.6905	9.44754	1.8785	1.28600	5.6709	9.36863
3150	3148	327.987	1.6889	9.43847	1.8864	1.29141	5.6646	9.35835
3200	3198	327.788	1.6873	9.42940	1.8943	1.29685	5.6584	9.34807
3250	3248	327.589	1.6857	9.42033	1.9023	1.30232	5.6522	9.33778
3300	3298	327.390	1.6840	9.41125	1.9104	1.30782	5.6460	9.32749
3350	3348	327.191	1.6824	9.40217	1.9184	1.31335	5.6397	9.31719
3400	3398	326.991	1.6808	9.39308	1.9266	1.31891	5.6335	9.30690
3450	3448	326.792	1.6792	9.38398	1.9347	1.32450	5.6273	9.29660
3500	3498	326.592	1.6775 - 5	9.37488 - 1	1.9429 - 5	1.33011 + 0	5.6210 - 6	9.28630 - 1
3550	3548	326.392	1.6759	9.36578	1.9512	1.33576	5.6148	9.27599
3600	3598	326.192	1.6743	9.35667	1.9595	1.34144	5.6085	9.26568
3650	3648	325.992	1.6726	9.34755	1.9678	1.34715	5.6023	9.25537
3700	3698	325.792	1.6710	9.33843	1.9762	1.35289	5.5961	9.24505
3750	3748	325.592	1.6694	9.32931	1.9846	1.35866	5.5898	9.23473
3800	3798	325.391	1.6677	9.32018	1.9931	1.36446	5.5836	9.22441
3850	3848	325.191	1.6661	9.31104	2.0016	1.37029	5.5773	9.21409
3900	3898	324.990	1.6645	9.30190	2.0102	1.37616	5.5711	9.20376
3950	3948	324.790	1.6628	9.29276	2.0188	1.38206	5.5648	9.19343
4000	3997	324.589	1.6612 - 5	9.28361 - 1	2.0275 - 5	1.38798 + 0	5.5586 - 6	9.18310 - 1
4050	4047	324.388	1.6596	9.27445	2.0362	1.39395	5.5523	9.17276
4100	4097	324.187	1.6579	9.26529	2.0449	1.39994	5.5460	9.16242
4150	4147	323.985	1.6563	9.25612	2.0537	1.40597	5.5398	9.15208
4200	4197	323.784	1.6546	9.24695	2.0626	1.41203	5.5335	9.14173
4250	4247	323.582	1.6530	9.23778	2.0715	1.41812	5.5273	9.13138
4300	4297	323.381	1.6513	9.22860	2.0804	1.42424	5.5210	9.12103
4350	4347	323.179	1.6497	9.21941	2.0894	1.43040	5.5147	9.11067
4400	4397	322.977	1.6481	9.21022	2.0985	1.43660	5.5084	9.10031
4450	4447	322.775	1.6464	9.20102	2.1076	1.44283	5.5022	9.08995
4500	4497	322.573	1.6448 - 5	9.19182 - 1	2.1167 - 5	1.44909 + 0	5.4959 - 6	9.07958 - 1
4550	4547	322.371	1.6431	9.18261	2.1259	1.45538	5.4896	9.06922
4600	4597	322.169	1.6415	9.17340	2.1352	1.46171	5.4833	9.05884
4650	4647	321.966	1.6398	9.16418	2.1445	1.46808	5.4771	9.04847
4700	4697	321.764	1.6382	9.15496	2.1538	1.47448	5.4708	9.03809
4750	4746	321.561	1.6365	9.14573	2.1632	1.48092	5.4645	9.02771
4800	4796	321.358	1.6349	9.13650	2.1727	1.48739	5.4582	9.01733
4850	4846	321.155	1.6332	9.12726	2.1822	1.49390	5.4519	9.00694
4900	4896	320.952	1.6316	9.11801	2.1917	1.50044	5.4456	8.99655
4950	4946	320.749	1.6299	9.10876	2.2013	1.50702	5.4393	8.98616
5000	4996	320.545	1.6282 - 5	9.09951 - 1	2.2110 - 5	1.51364 + 0	5.4331 - 6	8.97576 - 1
5050	5046	320.342	1.6266	9.09025	2.2207	1.52030	5.4268	8.96536
5100	5096	320.138	1.6249	9.08099	2.2305	1.52699	5.4205	8.95496
5150	5146	319.935	1.6233	9.07171	2.2403	1.53372	5.4142	8.94455
5200	5196	319.731	1.6216	9.06244	2.2502	1.54048	5.4079	8.93414
5250	5246	319.527	1.6200	9.05316	2.2602	1.54729	5.4016	8.92373
5300	5296	319.323	1.6183	9.04387	2.2701	1.55413	5.3953	8.91332
5350	5346	319.118	1.6166	9.03458	2.2802	1.56101	5.3890	8.90290
5400	5395	318.914	1.6150	9.02528	2.2903	1.56793	5.3826	8.89248
5450	5445	318.710	1.6133	9.01598	2.3005	1.57489	5.3763	8.88205
5500	5495	318.505	1.6116 - 5	9.00667 - 1	2.3107 - 5	1.58189 + 0	5.3700 - 6	8.87163 - 1
5550	5545	318.300	1.6100	8.99736	2.3210	1.58892	5.3637	8.86119
5600	5595	318.095	1.6083	8.98804	2.3313	1.59600	5.3574	8.85076
5650	5645	317.890	1.6066	8.97872	2.3417	1.60312	5.3511	8.84032
5700	5695	317.685	1.6050	8.96939	2.3522	1.61028	5.3448	8.82988
5750	5745	317.480	1.6033	8.96006	2.3627	1.61747	5.3384	8.81944
5800	5795	317.275	1.6016	8.95072	2.3733	1.62471	5.3321	8.80899
5850	5845	317.069	1.6000	8.94137	2.3839	1.63199	5.3258	8.79854
5900	5895	316.863	1.5983	8.93202	2.3946	1.63931	5.3195	8.78809
5950	5944	316.658	1.5966	8.92267	2.4053	1.64668	5.3131	8.77764
6000	5994	316.452	1.5949 - 5	8.91330 - 1	2.4162 - 5	1.65408 + 0	5.3068 - 6	8.76718 - 1
6050	6044	316.246	1.5933	8.90394	2.4270	1.66153	5.3005	8.75671
6100	6094	316.039	1.5916	8.89456	2.4380	1.66902	5.2941	8.74625
6150	6144	315.833	1.5899	8.88519	2.4490	1.67655	5.2878	8.73578
6200	6194	315.627	1.5882	8.87580	2.4600	1.68413	5.2815	8.72531
6250	6244	315.420	1.5865	8.86642	2.4712	1.69175	5.2751	8.71483
6300	6294	315.213	1.5849	8.85702	2.4824	1.69941	5.2688	8.70436
6350	6344	315.007	1.5832	8.84762	2.4936	1.70712	5.2624	8.69388
6400	6394	314.800	1.5815	8.83822	2.5049	1.71487	5.2561	8.68339
6450	6443	314.593	1.5798	8.82881	2.5163	1.72267	5.2497	8.67291
6500	6493	314.385	1.5781 - 5	8.81939 - 1	2.5278 - 5	1.73051 + 0	5.2434 - 6	8.66242 - 1
6550	6543	314.178	1.5764	8.80997	2.5393	1.73840	5.2370	8.65192
6600	6593	313.970	1.5748	8.80054	2.5509	1.74633	5.2307	8.64143
6650	6643	313.763	1.5731	8.79111	2.5626	1.75431	5.2243	8.63093
6700	6693	313.555	1.5714	8.78167	2.5743	1.76233	5.2180	8.62042
6750	6743	313.347	1.5697	8.77223	2.5861	1.77040	5.2116	8.60992
6800	6793	313.139	1.5680	8.76278	2.5979	1.77852	5.2052	8.59941
6850	6843	312.931	1.5663	8.75333	2.6099	1.78669	5.1989	8.58890
6900	6893	312.723	1.5646	8.74387	2.6219	1.79490	5.1925	8.57838
6950	6942	312.514	1.5629	8.73440	2.6339	1.80316	5.1862	8.56786

TABLE III. — Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
7000	7008	312.273	1.5610 - 5	8.72347 - 1	2.6479 - 5	1.81276 + 0	5.1788 - 6	8.55572 - 1
7050	7058	312.064	1.5593	8.71397	2.6602	1.82115	5.1724	8.54517
7100	7108	311.855	1.5576	8.70447	2.6725	1.82958	5.1660	8.53462
7150	7158	311.645	1.5559	8.69495	2.6849	1.83806	5.1596	8.52406
7200	7208	311.436	1.5542	8.68544	2.6974	1.84660	5.1532	8.51350
7250	7258	311.226	1.5525	8.67592	2.7099	1.85518	5.1469	8.50294
7300	7308	311.016	1.5507	8.66639	2.7225	1.86382	5.1405	8.49238
7350	7359	310.806	1.5490	8.65686	2.7352	1.87250	5.1341	8.48181
7400	7409	310.596	1.5473	8.64732	2.7480	1.88124	5.1277	8.47124
7450	7459	310.386	1.5456	8.63777	2.7608	1.89003	5.1213	8.46066
7500	7509	310.175	1.5439 - 5	8.62822 - 1	2.7737 - 5	1.89887 + 0	5.1149 - 6	8.45009 - 1
7550	7559	309.965	1.5422	8.61867	2.7867	1.90777	5.1085	8.43950
7600	7609	309.754	1.5405	8.60910	2.7998	1.91672	5.1021	8.42892
7650	7659	309.543	1.5388	8.59954	2.8129	1.92572	5.0956	8.41833
7700	7709	309.332	1.5371	8.58996	2.8262	1.93477	5.0892	8.40774
7750	7759	309.121	1.5354	8.58038	2.8395	1.94388	5.0828	8.39715
7800	7810	308.909	1.5336	8.57080	2.8529	1.95305	5.0764	8.38655
7850	7860	308.698	1.5319	8.56121	2.8663	1.96226	5.0700	8.37595
7900	7910	308.486	1.5302	8.55161	2.8799	1.97154	5.0636	8.36534
7950	7960	308.274	1.5285	8.54200	2.8935	1.98087	5.0571	8.35474
8000	8010	308.063	1.5268 - 5	8.53240 - 1	2.9072 - 5	1.99026 + 0	5.0507 - 6	8.34412 - 1
8050	8060	307.850	1.5250	8.52278	2.9210	1.99970	5.0443	8.33351
8100	8110	307.638	1.5233	8.51316	2.9349	2.00920	5.0379	8.32289
8150	8160	307.426	1.5216	8.50353	2.9488	2.01876	5.0314	8.31227
8200	8211	307.213	1.5199	8.49390	2.9629	2.02837	5.0250	8.30165
8250	8261	307.001	1.5182	8.48426	2.9770	2.03805	5.0186	8.29102
8300	8311	306.788	1.5164	8.47462	2.9912	2.04778	5.0121	8.28039
8350	8361	306.575	1.5147	8.46496	3.0055	2.05758	5.0057	8.26976
8400	8411	306.362	1.5130	8.45531	3.0199	2.06743	4.9993	8.25912
8450	8461	306.149	1.5112	8.44565	3.0344	2.07734	4.9928	8.24848
8500	8511	305.935	1.5095 - 5	8.43598 - 1	3.0490 - 5	2.08731 + 0	4.9864 - 6	8.23783 - 1
8550	8562	305.722	1.5078	8.42630	3.0636	2.09735	4.9799	8.22719
8600	8612	305.508	1.5061	8.41662	3.0784	2.10744	4.9735	8.21654
8650	8662	305.294	1.5043	8.40693	3.0932	2.11760	4.9670	8.20588
8700	8712	305.080	1.5026	8.39724	3.1081	2.12782	4.9606	8.19523
8750	8762	304.866	1.5009	8.38754	3.1232	2.13810	4.9541	8.18456
8800	8812	304.652	1.4991	8.37784	3.1383	2.14845	4.9477	8.17390
8850	8862	304.437	1.4974	8.36813	3.1535	2.15886	4.9412	8.16323
8900	8912	304.223	1.4956	8.35841	3.1688	2.16933	4.9348	8.15256
8950	8963	304.008	1.4939	8.34869	3.1842	2.17987	4.9283	8.14189
9000	9013	303.793	1.4922 - 5	8.33896 - 1	3.1997 - 5	2.19047 + 0	4.9218 - 6	8.13121 - 1
9050	9063	303.578	1.4904	8.32922	3.2153	2.20114	4.9154	8.12053
9100	9113	303.363	1.4887	8.31948	3.2309	2.21188	4.9089	8.10985
9150	9163	303.148	1.4869	8.30974	3.2467	2.22268	4.9024	8.09916
9200	9213	302.932	1.4852	8.29998	3.2626	2.23355	4.8960	8.08847
9250	9263	302.717	1.4834	8.29022	3.2786	2.24449	4.8895	8.07778
9300	9314	302.501	1.4817	8.28046	3.2946	2.25549	4.8830	8.06708
9350	9364	302.285	1.4799	8.27069	3.3108	2.26657	4.8766	8.05638
9400	9414	302.069	1.4782	8.26091	3.3271	2.27771	4.8701	8.04568
9450	9464	301.852	1.4764	8.25112	3.3435	2.28893	4.8636	8.03498
9500	9514	301.636	1.4747 - 5	8.24133 - 1	3.3600 - 5	2.30021 + 0	4.8571 - 6	8.02427 - 1
9550	9564	301.419	1.4729	8.23154	3.3765	2.31156	4.8506	8.01355
9600	9615	301.203	1.4712	8.22173	3.3932	2.32299	4.8441	8.00284
9650	9665	300.986	1.4694	8.21193	3.4100	2.33449	4.8377	7.99212
9700	9715	300.769	1.4677	8.20211	3.4269	2.34606	4.8312	7.98139
9750	9765	300.551	1.4659	8.19229	3.4439	2.35770	4.8247	7.97067
9800	9815	300.334	1.4642	8.18246	3.4611	2.36942	4.8182	7.95994
9850	9865	300.117	1.4624	8.17263	3.4783	2.38121	4.8117	7.94921
9900	9915	299.899	1.4606	8.16279	3.4956	2.39308	4.8052	7.93847
9950	9966	299.681	1.4589	8.15294	3.5131	2.40502	4.7987	7.92773
10000	10016	299.463	1.4571 - 5	8.14309 - 1	3.5306 - 5	2.41704 + 0	4.7922 - 6	7.91699 - 1
10050	10066	299.245	1.4553	8.13323	3.5483	2.42914	4.7857	7.90624
10100	10116	299.027	1.4536	8.12337	3.5661	2.44131	4.7792	7.89550
10150	10166	298.808	1.4518	8.11350	3.5840	2.45356	4.7727	7.88474
10200	10216	298.590	1.4500	8.10362	3.6020	2.46589	4.7661	7.87399
10250	10267	298.371	1.4483	8.09374	3.6201	2.47829	4.7596	7.86323
10300	10317	298.152	1.4465	8.08385	3.6383	2.49078	4.7531	7.85247
10350	10367	297.933	1.4447	8.07395	3.6567	2.50335	4.7466	7.84170
10400	10417	297.713	1.4430	8.06405	3.6752	2.51599	4.7401	7.83093
10450	10467	297.494	1.4412	8.05414	3.6938	2.52872	4.7336	7.82016
10500	10517	297.274	1.4394 - 5	8.04422 - 1	3.7125 - 5	2.54153 + 0	4.7270 - 6	7.80939 - 1
10550	10568	297.055	1.4376	8.03430	3.7313	2.55443	4.7205	7.79861
10600	10618	296.835	1.4359	8.02438	3.7503	2.56741	4.7140	7.78783
10650	10668	296.615	1.4341	8.01444	3.7693	2.58047	4.7075	7.77704
10700	10718	296.394	1.4323	8.00450	3.7885	2.59361	4.7009	7.76626
10750	10768	296.174	1.4305	7.99455	3.8079	2.60685	4.6944	7.75546
10800	10818	295.953	1.4287	7.98460	3.8273	2.62016	4.6879	7.74467
10850	10869	295.733	1.4270	7.97464	3.8469	2.63357	4.6813	7.73387
10900	10919	295.512	1.4252	7.96468	3.8666	2.64706	4.6748	7.72307
10950	10969	295.291	1.4234	7.95470	3.8864	2.66064	4.6683	7.71227

TABLE III. — Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
7000	6992	312.306	1.5612 - 5	8.72493 - 1	2.6461 - 5	1.81147 + 0	5.1798 - 6	8.55734 - 1
7050	7042	312.097	1.5595	8.71545	2.6583	1.81983	5.1734	8.54682
7100	7092	311.888	1.5578	8.70597	2.6705	1.82824	5.1670	8.53629
7150	7142	311.679	1.5561	8.69648	2.6829	1.83670	5.1607	8.52576
7200	7192	311.470	1.5544	8.68699	2.6953	1.84520	5.1543	8.51523
7250	7242	311.261	1.5527	8.67749	2.7078	1.85376	5.1479	8.50469
7300	7292	311.051	1.5510	8.66799	2.7204	1.86237	5.1415	8.49415
7350	7342	310.842	1.5493	8.65848	2.7330	1.87102	5.1352	8.48360
7400	7391	310.632	1.5476	8.64896	2.7458	1.87973	5.1288	8.47306
7450	7441	310.422	1.5459	8.63944	2.7586	1.88849	5.1224	8.46251
7500	7491	310.212	1.5442 - 5	8.62991 - 1	2.7714 - 5	1.89731 + 0	5.1160 - 6	8.45196 - 1
7550	7541	310.002	1.5425	8.62038	2.7844	1.90617	5.1096	8.44140
7600	7591	309.792	1.5408	8.61084	2.7974	1.91509	5.1032	8.43084
7650	7641	309.582	1.5391	8.60130	2.8105	1.92406	5.0968	8.42028
7700	7691	309.371	1.5374	8.59175	2.8237	1.93308	5.0904	8.40971
7750	7741	309.160	1.5357	8.58219	2.8369	1.94216	5.0840	8.39915
7800	7790	308.950	1.5340	8.57263	2.8503	1.95129	5.0776	8.38858
7850	7840	308.739	1.5323	8.56306	2.8637	1.96048	5.0712	8.37800
7900	7890	308.528	1.5305	8.55349	2.8772	1.96972	5.0648	8.36742
7950	7940	308.317	1.5288	8.54391	2.8908	1.97901	5.0584	8.35684
8000	7990	308.105	1.5271 - 5	8.53433 - 1	2.9044 - 5	1.98836 + 0	5.0520 - 6	8.34626 - 1
8050	8040	307.894	1.5254	8.52474	2.9182	1.99777	5.0456	8.33567
8100	8090	307.682	1.5237	8.51514	2.9320	2.00724	5.0392	8.32508
8150	8140	307.470	1.5220	8.50554	2.9459	2.01676	5.0328	8.31449
8200	8189	307.258	1.5202	8.49593	2.9599	2.02634	5.0264	8.30389
8250	8239	307.046	1.5185	8.48632	2.9740	2.03598	5.0200	8.29329
8300	8289	306.834	1.5168	8.47670	2.9882	2.04567	5.0135	8.28269
8350	8339	306.622	1.5151	8.46708	3.0024	2.05542	5.0071	8.27209
8400	8389	306.409	1.5134	8.45745	3.0167	2.06524	5.0007	8.26148
8450	8439	306.197	1.5116	8.44781	3.0312	2.07511	4.9943	8.25087
8500	8489	305.984	1.5099 - 5	8.43817 - 1	3.0457 - 5	2.08504 + 0	4.9878 - 6	8.24025 - 1
8550	8539	305.771	1.5082	8.42852	3.0603	2.09504	4.9814	8.22963
8600	8588	305.558	1.5065	8.41887	3.0749	2.10509	4.9750	8.21901
8650	8638	305.345	1.5047	8.40921	3.0897	2.11520	4.9686	8.20839
8700	8688	305.131	1.5030	8.39955	3.1046	2.12538	4.9621	8.19776
8750	8738	304.918	1.5013	8.38988	3.1195	2.13562	4.9557	8.18713
8800	8788	304.704	1.4995	8.38020	3.1346	2.14592	4.9493	8.17650
8850	8838	304.490	1.4978	8.37052	3.1497	2.15629	4.9428	8.16586
8900	8888	304.276	1.4961	8.36083	3.1650	2.16672	4.9364	8.15522
8950	8937	304.062	1.4943	8.35114	3.1803	2.17721	4.9299	8.14458
9000	8987	303.848	1.4926 - 5	8.34144 - 1	3.1957 - 5	2.18777 + 0	4.9235 - 6	8.13393 - 1
9050	9037	303.634	1.4909	8.33173	3.2112	2.19839	4.9170	8.12328
9100	9087	303.419	1.4891	8.32202	3.2268	2.20908	4.9106	8.11263
9150	9137	303.204	1.4874	8.31230	3.2426	2.21983	4.9042	8.10198
9200	9187	302.989	1.4856	8.30258	3.2584	2.23065	4.8977	8.09132
9250	9237	302.775	1.4839	8.29285	3.2743	2.24154	4.8912	8.08066
9300	9286	302.559	1.4822	8.28311	3.2903	2.25250	4.8848	8.06999
9350	9336	302.344	1.4804	8.27337	3.3064	2.26352	4.8783	8.05932
9400	9386	302.129	1.4787	8.26362	3.3226	2.27461	4.8719	8.04865
9450	9436	301.913	1.4769	8.25387	3.3389	2.28577	4.8654	8.03798
9500	9486	301.697	1.4752 - 5	8.24411 - 1	3.3553 - 5	2.29700 + 0	4.8590 - 6	8.02730 - 1
9550	9536	301.481	1.4734	8.23434	3.3718	2.30830	4.8525	8.01662
9600	9586	301.265	1.4717	8.22457	3.3884	2.31967	4.8460	8.00594
9650	9635	301.049	1.4699	8.21480	3.4051	2.33112	4.8396	7.99525
9700	9685	300.833	1.4682	8.20501	3.4219	2.34263	4.8331	7.98456
9750	9735	300.616	1.4664	8.19522	3.4389	2.35422	4.8266	7.97387
9800	9785	300.400	1.4647	8.18543	3.4559	2.36588	4.8201	7.96318
9850	9835	300.183	1.4629	8.17563	3.4730	2.37761	4.8137	7.95248
9900	9885	299.966	1.4612	8.16582	3.4903	2.38942	4.8072	7.94178
9950	9934	299.749	1.4594	8.15601	3.5076	2.40130	4.8007	7.93107
10000	9984	299.532	1.4577 - 5	8.14619 - 1	3.5251 - 5	2.41326 + 0	4.7942 - 6	7.92037 - 1
10050	10034	299.314	1.4559	8.13636	3.5427	2.42529	4.7877	7.90965
10100	10084	299.097	1.4541	8.12653	3.5604	2.43740	4.7813	7.89894
10150	10134	298.879	1.4524	8.11669	3.5782	2.44958	4.7748	7.88822
10200	10184	298.661	1.4506	8.10685	3.5961	2.46185	4.7683	7.87750
10250	10233	298.443	1.4489	8.09700	3.6141	2.47419	4.7618	7.86678
10300	10283	298.225	1.4471	8.08714	3.6322	2.48661	4.7553	7.85605
10350	10333	298.006	1.4453	8.07728	3.6505	2.49911	4.7488	7.84533
10400	10383	297.788	1.4436	8.06741	3.6689	2.51169	4.7423	7.83459
10450	10433	297.569	1.4418	8.05754	3.6874	2.52435	4.7358	7.82386
10500	10483	297.350	1.4400 - 5	8.04766 - 1	3.7060 - 5	2.53709 + 0	4.7293 - 6	7.81312 - 1
10550	10533	297.131	1.4383	8.03777	3.7247	2.54991	4.7228	7.80238
10600	10582	296.912	1.4365	8.02788	3.7436	2.56282	4.7163	7.79163
10650	10632	296.693	1.4347	8.01798	3.7625	2.57580	4.7098	7.78089
10700	10682	296.474	1.4329	8.00808	3.7816	2.58888	4.7033	7.77014
10750	10732	296.254	1.4312	7.99817	3.8008	2.60203	4.6968	7.75938
10800	10782	296.034	1.4294	7.98825	3.8202	2.61527	4.6903	7.74863
10850	10832	295.814	1.4276	7.97833	3.8396	2.62860	4.6838	7.73787
10900	10881	295.594	1.4258	7.96840	3.8592	2.64201	4.6772	7.72710
10950	10931	295.374	1.4241	7.95846	3.8790	2.65551	4.6707	7.71634



TABLE III. — Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
11000	11019	295.069	1.4216 - 5	7.94472 - 1	3.9064 - 5	2.67431 + 0	4.6617 - 6	7.70146 - 1
11100	11119	295.069	1.4216	7.94472	3.9685	2.71681	4.6617	7.70146
11200	11220	295.069	1.4216	7.94472	4.0316	2.75999	4.6617	7.70146
11300	11320	295.069	1.4216	7.94472	4.0957	2.80386	4.6617	7.70146
11400	11420	295.069	1.4216	7.94472	4.1608	2.84843	4.6617	7.70146
11500	11521	295.069	1.4216	7.94472	4.2269	2.89370	4.6617	7.70146
11600	11621	295.069	1.4216	7.94472	4.2941	2.93969	4.6617	7.70146
11700	11722	295.069	1.4216	7.94472	4.3623	2.98641	4.6617	7.70146
11800	11822	295.069	1.4216	7.94472	4.4316	3.03388	4.6617	7.70146
11900	11922	295.069	1.4216	7.94472	4.5021	3.08210	4.6617	7.70146
12000	12023	295.069	1.4216 - 5	7.94472 - 1	4.5736 - 5	3.13108 + 0	4.6617 - 6	7.70146 - 1
12100	12123	295.069	1.4216	7.94472	4.6463	3.18085	4.6617	7.70146
12200	12223	295.069	1.4216	7.94472	4.7202	3.23141	4.6617	7.70146
12300	12324	295.069	1.4216	7.94472	4.7952	3.28276	4.6617	7.70146
12400	12424	295.069	1.4216	7.94472	4.8714	3.33494	4.6617	7.70146
12500	12525	295.069	1.4216	7.94472	4.9488	3.38795	4.6617	7.70146
12600	12625	295.069	1.4216	7.94472	5.0275	3.44179	4.6617	7.70146
12700	12725	295.069	1.4216	7.94472	5.1074	3.49650	4.6617	7.70146
12800	12826	295.069	1.4216	7.94472	5.1886	3.55207	4.6617	7.70146
12900	12926	295.069	1.4216	7.94472	5.2710	3.60853	4.6617	7.70146
13000	13027	295.069	1.4216 - 5	7.94472 - 1	5.3548 - 5	3.66588 + 0	4.6617 - 6	7.70146 - 1
13100	13127	295.069	1.4216	7.94472	5.4399	3.72414	4.6617	7.70146
13200	13227	295.069	1.4216	7.94472	5.5264	3.78333	4.6617	7.70146
13300	13328	295.069	1.4216	7.94472	5.6142	3.84347	4.6617	7.70146
13400	13428	295.069	1.4216	7.94472	5.7035	3.90455	4.6617	7.70146
13500	13529	295.069	1.4216	7.94472	5.7941	3.96661	4.6617	7.70146
13600	13629	295.069	1.4216	7.94472	5.8862	4.02966	4.6617	7.70146
13700	13730	295.069	1.4216	7.94472	5.9798	4.09370	4.6617	7.70146
13800	13830	295.069	1.4216	7.94472	6.0748	4.15877	4.6617	7.70146
13900	13930	295.069	1.4216	7.94472	6.1713	4.22487	4.6617	7.70146
14000	14031	295.069	1.4216 - 5	7.94472 - 1	6.2694 - 5	4.29202 + 0	4.6617 - 6	7.70146 - 1
14100	14131	295.069	1.4216	7.94472	6.3691	4.36023	4.6617	7.70146
14200	14232	295.069	1.4216	7.94472	6.4703	4.42953	4.6617	7.70146
14300	14332	295.069	1.4216	7.94472	6.5731	4.49994	4.6617	7.70146
14400	14433	295.069	1.4216	7.94472	6.6776	4.57146	4.6617	7.70146
14500	14533	295.069	1.4216	7.94472	6.7838	4.64412	4.6617	7.70146
14600	14634	295.069	1.4216	7.94472	6.8916	4.71793	4.6617	7.70146
14700	14734	295.069	1.4216	7.94472	7.0011	4.79291	4.6617	7.70146
14800	14835	295.069	1.4216	7.94472	7.1124	4.86909	4.6617	7.70146
14900	14935	295.069	1.4216	7.94472	7.2254	4.94648	4.6617	7.70146
15000	15035	295.069	1.4216 - 5	7.94472 - 1	7.3403 - 5	5.02510 + 0	4.6617 - 6	7.70146 - 1
15100	15136	295.069	1.4216	7.94472	7.4569	5.10497	4.6617	7.70146
15200	15236	295.069	1.4216	7.94472	7.5754	5.18611	4.6617	7.70146
15300	15337	295.069	1.4216	7.94472	7.6958	5.26853	4.6617	7.70146
15400	15437	295.069	1.4216	7.94472	7.8182	5.35227	4.6617	7.70146
15500	15538	295.069	1.4216	7.94472	7.9424	5.43734	4.6617	7.70146
15600	15638	295.069	1.4216	7.94472	8.0687	5.52376	4.6617	7.70146
15700	15739	295.069	1.4216	7.94472	8.1969	5.61155	4.6617	7.70146
15800	15839	295.069	1.4216	7.94472	8.3272	5.70074	4.6617	7.70146
15900	15940	295.069	1.4216	7.94472	8.4595	5.79135	4.6617	7.70146
16000	16040	295.069	1.4216 - 5	7.94472 - 1	8.5940 - 5	5.88339 + 0	4.6617 - 6	7.70146 - 1
16100	16141	295.069	1.4216	7.94472	8.7306	5.97690	4.6617	7.70146
16200	16241	295.069	1.4216	7.94472	8.8693	6.07190	4.6617	7.70146
16300	16342	295.069	1.4216	7.94472	9.0103	6.16841	4.6617	7.70146
16400	16442	295.069	1.4216	7.94472	9.1535	6.26645	4.6617	7.70146
16500	16543	295.069	1.4216	7.94472	9.2990	6.36604	4.6617	7.70146
16600	16643	295.069	1.4216	7.94472	9.4468	6.46722	4.6617	7.70146
16700	16744	295.069	1.4216	7.94472	9.5969	6.57001	4.6617	7.70146
16800	16845	295.069	1.4216	7.94472	9.7495	6.67444	4.6617	7.70146
16900	16945	295.069	1.4216	7.94472	9.9044	6.78052	4.6617	7.70146
17000	17046	295.069	1.4216 - 5	7.94472 - 1	1.0062 - 4	6.88829 + 0	4.6617 - 6	7.70146 - 1
17100	17146	295.069	1.4216	7.94472	1.0222	6.99777	4.6617	7.70146
17200	17247	295.069	1.4216	7.94472	1.0384	7.10899	4.6617	7.70146
17300	17347	295.069	1.4216	7.94472	1.0549	7.22198	4.6617	7.70146
17400	17448	295.069	1.4216	7.94472	1.0717	7.33676	4.6617	7.70146
17500	17548	295.069	1.4216	7.94472	1.0887	7.45337	4.6617	7.70146
17600	17649	295.069	1.4216	7.94472	1.1060	7.57184	4.6617	7.70146
17700	17749	295.069	1.4216	7.94472	1.1236	7.69218	4.6617	7.70146
17800	17850	295.069	1.4216	7.94472	1.1415	7.81444	4.6617	7.70146
17900	17951	295.069	1.4216	7.94472	1.1596	7.93864	4.6617	7.70146
18000	18051	295.069	1.4216 - 5	7.94472 - 1	1.1780 - 4	8.06482 + 0	4.6617 - 6	7.70146 - 1
18100	18152	295.069	1.4216	7.94472	1.1968	8.19300	4.6617	7.70146
18200	18252	295.069	1.4216	7.94472	1.2158	8.32321	4.6617	7.70146
18300	18353	295.069	1.4216	7.94472	1.2351	8.45550	4.6617	7.70146
18400	18453	295.069	1.4216	7.94472	1.2547	8.58989	4.6617	7.70146
18500	18554	295.069	1.4216	7.94472	1.2747	8.72642	4.6617	7.70146
18600	18655	295.069	1.4216	7.94472	1.2949	8.86512	4.6617	7.70146
18700	18755	295.069	1.4216	7.94472	1.3155	9.00602	4.6617	7.70146
18800	18856	295.069	1.4216	7.94472	1.3364	9.14916	4.6617	7.70146
18900	18956	295.069	1.4216	7.94472	1.3577	9.29457	4.6617	7.70146

TABLE III. — Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
11000	10981	295.154	1.4223 - 5	7.94852 - 1	3.8988 - 5	2.66910 + 0	4.6642 - 6	7.70557 - 1
11100	11081	295.069	1.4216	7.94472	3.9564	2.70854	4.6617	7.70146
11200	11180	295.069	1.4216	7.94472	4.0191	2.75143	4.6617	7.70146
11300	11280	295.069	1.4216	7.94472	4.0827	2.79501	4.6617	7.70146
11400	11380	295.069	1.4216	7.94472	4.1474	2.83927	4.6617	7.70146
11500	11479	295.069	1.4216	7.94472	4.2131	2.88424	4.6617	7.70146
11600	11579	295.069	1.4216	7.94472	4.2798	2.92991	4.6617	7.70146
11700	11679	295.069	1.4216	7.94472	4.3475	2.97631	4.6617	7.70146
11800	11778	295.069	1.4216	7.94472	4.4164	3.02344	4.6617	7.70146
11900	11878	295.069	1.4216	7.94472	4.4863	3.07131	4.6617	7.70146
12000	11977	295.069	1.4216 - 5	7.94472 - 1	4.5574 - 5	3.11994 + 0	4.6617 - 6	7.70146 - 1
12100	12077	295.069	1.4216	7.94472	4.6295	3.16934	4.6617	7.70146
12200	12177	295.069	1.4216	7.94472	4.7028	3.21952	4.6617	7.70146
12300	12276	295.069	1.4216	7.94472	4.7773	3.27049	4.6617	7.70146
12400	12376	295.069	1.4216	7.94472	4.8529	3.32227	4.6617	7.70146
12500	12475	295.069	1.4216	7.94472	4.9297	3.37486	4.6617	7.70146
12600	12575	295.069	1.4216	7.94472	5.0078	3.42829	4.6617	7.70146
12700	12675	295.069	1.4216	7.94472	5.0870	3.48256	4.6617	7.70146
12800	12774	295.069	1.4216	7.94472	5.1676	3.53769	4.6617	7.70146
12900	12874	295.069	1.4216	7.94472	5.2494	3.59369	4.6617	7.70146
13000	12973	295.069	1.4216 - 5	7.94472 - 1	5.3325 - 5	3.65057 + 0	4.6617 - 6	7.70146 - 1
13100	13073	295.069	1.4216	7.94472	5.4169	3.70835	4.6617	7.70146
13200	13173	295.069	1.4216	7.94472	5.5026	3.76705	4.6617	7.70146
13300	13272	295.069	1.4216	7.94472	5.5897	3.82667	4.6617	7.70146
13400	13372	295.069	1.4216	7.94472	5.6782	3.88723	4.6617	7.70146
13500	13471	295.069	1.4216	7.94472	5.7680	3.94876	4.6617	7.70146
13600	13571	295.069	1.4216	7.94472	5.8593	4.01125	4.6617	7.70146
13700	13671	295.069	1.4216	7.94472	5.9520	4.07473	4.6617	7.70146
13800	13770	295.069	1.4216	7.94472	6.0462	4.13921	4.6617	7.70146
13900	13870	295.069	1.4216	7.94472	6.1419	4.20471	4.6617	7.70146
14000	13969	295.069	1.4216 - 5	7.94472 - 1	6.2391 - 5	4.27124 + 0	4.6617 - 6	7.70146 - 1
14100	14069	295.069	1.4216	7.94472	6.3378	4.33883	4.6617	7.70146
14200	14168	295.069	1.4216	7.94472	6.4381	4.40748	4.6617	7.70146
14300	14268	295.069	1.4216	7.94472	6.5400	4.47722	4.6617	7.70146
14400	14367	295.069	1.4216	7.94472	6.6434	4.54805	4.6617	7.70146
14500	14467	295.069	1.4216	7.94472	6.7485	4.62001	4.6617	7.70146
14600	14567	295.069	1.4216	7.94472	6.8553	4.69310	4.6617	7.70146
14700	14666	295.069	1.4216	7.94472	6.9638	4.76735	4.6617	7.70146
14800	14766	295.069	1.4216	7.94472	7.0739	4.84277	4.6617	7.70146
14900	14865	295.069	1.4216	7.94472	7.1858	4.91937	4.6617	7.70146
15000	14965	295.069	1.4216 - 5	7.94472 - 1	7.2995 - 5	4.99719 + 0	4.6617 - 6	7.70146 - 1
15100	15064	295.069	1.4216	7.94472	7.4150	5.07624	4.6617	7.70146
15200	15164	295.069	1.4216	7.94472	7.5323	5.15653	4.6617	7.70146
15300	15263	295.069	1.4216	7.94472	7.6514	5.23810	4.6617	7.70146
15400	15363	295.069	1.4216	7.94472	7.7724	5.32095	4.6617	7.70146
15500	15462	295.069	1.4216	7.94472	7.8953	5.40510	4.6617	7.70146
15600	15562	295.069	1.4216	7.94472	8.0202	5.49059	4.6617	7.70146
15700	15661	295.069	1.4216	7.94472	8.1471	5.57742	4.6617	7.70146
15800	15761	295.069	1.4216	7.94472	8.2759	5.66563	4.6617	7.70146
15900	15860	295.069	1.4216	7.94472	8.4068	5.75523	4.6617	7.70146
16000	15960	295.069	1.4216 - 5	7.94472 - 1	8.5397 - 5	5.84624 + 0	4.6617 - 6	7.70146 - 1
16100	16059	295.069	1.4216	7.94472	8.6748	5.93869	4.6617	7.70146
16200	16159	295.069	1.4216	7.94472	8.8119	6.03259	4.6617	7.70146
16300	16258	295.069	1.4216	7.94472	8.9513	6.12798	4.6617	7.70146
16400	16358	295.069	1.4216	7.94472	9.0928	6.22488	4.6617	7.70146
16500	16457	295.069	1.4216	7.94472	9.2366	6.32330	4.6617	7.70146
16600	16557	295.069	1.4216	7.94472	9.3826	6.42328	4.6617	7.70146
16700	16656	295.069	1.4216	7.94472	9.5309	6.52483	4.6617	7.70146
16800	16756	295.069	1.4216	7.94472	9.6816	6.62799	4.6617	7.70146
16900	16855	295.069	1.4216	7.94472	9.8347	6.73277	4.6617	7.70146
17000	16955	295.069	1.4216 - 5	7.94472 - 1	9.9902 - 5	6.83921 + 0	4.6617 - 6	7.70146 - 1
17100	17054	295.069	1.4216	7.94472	1.0148 - 4	6.94732	4.6617	7.70146
17200	17154	295.069	1.4216	7.94472	1.0309	7.05714	4.6617	7.70146
17300	17253	295.069	1.4216	7.94472	1.0471	7.16870	4.6617	7.70146
17400	17352	295.069	1.4216	7.94472	1.0637	7.28201	4.6617	7.70146
17500	17452	295.069	1.4216	7.94472	1.0805	7.39711	4.6617	7.70146
17600	17551	295.069	1.4216	7.94472	1.0976	7.51403	4.6617	7.70146
17700	17651	295.069	1.4216	7.94472	1.1149	7.63279	4.6617	7.70146
17800	17750	295.069	1.4216	7.94472	1.1326	7.75342	4.6617	7.70146
17900	17850	295.069	1.4216	7.94472	1.1505	7.87596	4.6617	7.70146
18000	17949	295.069	1.4216 - 5	7.94472 - 1	1.1686 - 4	8.00043 + 0	4.6617 - 6	7.70146 - 1
18100	18049	295.069	1.4216	7.94472	1.1871	8.12686	4.6617	7.70146
18200	18148	295.069	1.4216	7.94472	1.2059	8.25529	4.6617	7.70146
18300	18247	295.069	1.4216	7.94472	1.2249	8.38574	4.6617	7.70146
18400	18347	295.069	1.4216	7.94472	1.2443	8.51825	4.6617	7.70146
18500	18446	295.069	1.4216	7.94472	1.2639	8.65285	4.6617	7.70146
18600	18546	295.069	1.4216	7.94472	1.2839	8.78957	4.6617	7.70146
18700	18645	295.069	1.4216	7.94472	1.3042	8.92845	4.6617	7.70146
18800	18745	295.069	1.4216	7.94472	1.3248	9.06952	4.6617	7.70146
18900	18844	295.069	1.4216	7.94472	1.3457	9.21281	4.6617	7.70146

TABLE III. - Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
$H, m$	$Z, m$	$C_s, m \text{ sec}^{-1}$	$\mu, kg \text{ m}^{-1} \text{ sec}^{-1}$	$\frac{\mu}{\mu_0}$	$\eta, m^2 \text{ sec}^{-1}$	$\frac{\eta}{\eta_0}$	$k, k \cdot \text{cal m}^{-1} \text{ sec}^{-1} (^{\circ}\text{K})^{-1}$	$\frac{k}{k_0}$
19000	19057	295.069	1.4216 - 5	7.94472 - 1	1.3793 - 4	9.44230 + 0	4.6617 - 6	7.70146 - 1
19100	19158	295.069	1.4216	7.94472	1.4012	9.59237	4.6617	7.70146
19200	19258	295.069	1.4216	7.94472	1.4234	9.74483	4.6617	7.70146
19300	19359	295.069	1.4216	7.94472	1.4461	9.89972	4.6617	7.70146
19400	19459	295.069	1.4216	7.94472	1.4691	1.00571 + 1	4.6617	7.70146
19500	19560	295.069	1.4216	7.94472	1.4924	1.02169	4.6617	7.70146
19600	19661	295.069	1.4216	7.94472	1.5161	1.03793	4.6617	7.70146
19700	19761	295.069	1.4216	7.94472	1.5402	1.05443	4.6617	7.70146
19800	19862	295.069	1.4216	7.94472	1.5647	1.07118	4.6617	7.70146
19900	19963	295.069	1.4216	7.94472	1.5896	1.08821	4.6617	7.70146
20000	20063	295.069	1.4216 - 5	7.94472 - 1	1.6148 - 4	1.10551 + 1	4.6617 - 6	7.70146 - 1
20100	20164	295.138	1.4222	7.94780	1.6419	1.12402	4.6637	7.70479
20200	20264	295.206	1.4227	7.95087	1.6694	1.14285	4.6657	7.70811
20300	20365	295.274	1.4233	7.95394	1.6973	1.16197	4.6678	7.71144
20400	20466	295.342	1.4238	7.95700	1.7257	1.18141	4.6698	7.71476
20500	20566	295.410	1.4244	7.96007	1.7546	1.20116	4.6718	7.71809
20600	20667	295.478	1.4249	7.96314	1.7839	1.22124	4.6738	7.72141
20700	20768	295.546	1.4255	7.96621	1.8137	1.24164	4.6758	7.72473
20800	20868	295.614	1.4260	7.96928	1.8440	1.26237	4.6778	7.72806
20900	20969	295.682	1.4266	7.97234	1.8747	1.28344	4.6798	7.73138
21000	21070	295.750	1.4271 - 5	7.97541 - 1	1.9060 - 4	1.30485 + 1	4.6818 - 6	7.73470 - 1
21100	21170	295.818	1.4277	7.97847	1.9378	1.32661	4.6839	7.73803
21200	21271	295.885	1.4282	7.98154	1.9701	1.34872	4.6859	7.74135
21300	21372	295.953	1.4287	7.98460	2.0029	1.37118	4.6879	7.74467
21400	21472	296.021	1.4293	7.98766	2.0363	1.39401	4.6899	7.74799
21500	21573	296.089	1.4298	7.99073	2.0702	1.41721	4.6919	7.75131
21600	21674	296.157	1.4304	7.99379	2.1046	1.44079	4.6939	7.75463
21700	21774	296.225	1.4309	7.99685	2.1396	1.46475	4.6959	7.75796
21800	21875	296.293	1.4315	7.99991	2.1751	1.48909	4.6979	7.76128
21900	21976	296.360	1.4320	8.00297	2.2113	1.51383	4.6999	7.76460
22000	22076	296.428	1.4326 - 5	8.00603 - 1	2.2480 - 4	1.53896 + 1	4.7019 - 6	7.76792 - 1
22100	22177	296.496	1.4331	8.00909	2.2853	1.56450	4.7040	7.77123
22200	22278	296.564	1.4337	8.01215	2.3232	1.59046	4.7060	7.77455
22300	22379	296.632	1.4342	8.01521	2.3617	1.61683	4.7080	7.77787
22400	22479	296.699	1.4348	8.01826	2.4009	1.64363	4.7100	7.78119
22500	22580	296.767	1.4353	8.02132	2.4407	1.67085	4.7120	7.78451
22600	22681	296.835	1.4359	8.02438	2.4811	1.69852	4.7140	7.78783
22700	22781	296.902	1.4364	8.02743	2.5221	1.72663	4.7160	7.79115
22800	22882	296.970	1.4370	8.03049	2.5638	1.75520	4.7180	7.79446
22900	22983	297.038	1.4375	8.03354	2.6062	1.78422	4.7200	7.79778
23000	23084	297.105	1.4381 - 5	8.03659 - 1	2.6493 - 4	1.81371 + 1	4.7220 - 6	7.80110 - 1
23100	23184	297.173	1.4386	8.03965	2.6931	1.84367	4.7240	7.80441
23200	23285	297.241	1.4391	8.04270	2.7376	1.87411	4.7260	7.80773
23300	23386	297.308	1.4397	8.04575	2.7827	1.90504	4.7280	7.81105
23400	23486	297.376	1.4402	8.04880	2.8286	1.93647	4.7301	7.81436
23500	23587	297.443	1.4408	8.05185	2.8753	1.96840	4.7321	7.81768
23600	23688	297.511	1.4413	8.05490	2.9227	2.00085	4.7341	7.82099
23700	23789	297.578	1.4419	8.05795	2.9708	2.03381	4.7361	7.82431
23800	23889	297.646	1.4424	8.06100	3.0197	2.06730	4.7381	7.82762
23900	23990	297.713	1.4430	8.06405	3.0694	2.10132	4.7401	7.83093
24000	24091	297.781	1.4435 - 5	8.06710 - 1	3.1199 - 4	2.13589 + 1	4.7421 - 6	7.83425 - 1
24100	24192	297.848	1.4441	8.07014	3.1712	2.17102	4.7441	7.83756
24200	24292	297.916	1.4446	8.07319	3.2234	2.20670	4.7461	7.84087
24300	24393	297.983	1.4451	8.07624	3.2763	2.24295	4.7481	7.84419
24400	24494	298.051	1.4457	8.07928	3.3301	2.27979	4.7501	7.84750
24500	24595	298.118	1.4462	8.08233	3.3848	2.31721	4.7521	7.85081
24600	24696	298.186	1.4468	8.08537	3.4403	2.35522	4.7541	7.85412
24700	24796	298.253	1.4473	8.08841	3.4967	2.39385	4.7561	7.85744
24800	24897	298.320	1.4479	8.09146	3.5541	2.43308	4.7581	7.86075
24900	24998	298.388	1.4484	8.09450	3.6123	2.47295	4.7601	7.86406
25000	25099	298.455	1.4490 - 5	8.09754 - 1	3.6714 - 4	2.51344 + 1	4.7621 - 6	7.86737 - 1
25100	25200	298.522	1.4495	8.10058	3.7315	2.55459	4.7641	7.87068
25200	25300	298.590	1.4500	8.10362	3.7926	2.59638	4.7661	7.87399
25300	25401	298.657	1.4506	8.10666	3.8546	2.63884	4.7682	7.87730
25400	25502	298.724	1.4511	8.10970	3.9176	2.68198	4.7702	7.88061
25500	25603	298.791	1.4517	8.11274	3.9816	2.72580	4.7722	7.88392
25600	25704	298.859	1.4522	8.11578	4.0467	2.77031	4.7742	7.88723
25700	25804	298.926	1.4528	8.11881	4.1127	2.81554	4.7762	7.89053
25800	25905	298.993	1.4533	8.12185	4.1798	2.86148	4.7782	7.89384
25900	26006	299.060	1.4539	8.12489	4.2480	2.90814	4.7802	7.89715
26000	26107	299.127	1.4544 - 5	8.12792 - 1	4.3172 - 4	2.95555 + 1	4.7822 - 6	7.90046 - 1
26100	26208	299.195	1.4549	8.13096	4.3876	3.00371	4.7842	7.90376
26200	26308	299.262	1.4555	8.13399	4.4590	3.05263	4.7862	7.90707
26300	26409	299.329	1.4560	8.13703	4.5316	3.10233	4.7882	7.91038
26400	26510	299.396	1.4566	8.14006	4.6054	3.15281	4.7902	7.91368
26500	26611	299.463	1.4571	8.14309	4.6803	3.20408	4.7922	7.91699
26600	26712	299.530	1.4577	8.14612	4.7564	3.25617	4.7942	7.92030
26700	26813	299.597	1.4582	8.14916	4.8336	3.30909	4.7962	7.92360
26800	26913	299.664	1.4587	8.15219	4.9122	3.36283	4.7982	7.92691
26900	27014	299.731	1.4593	8.15522	4.9919	3.41743	4.8002	7.93021

TABLE III. - Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k·cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
19000	18943	295.069	1.4216 - 5	7.94472 - 1	1.3670 - 4	9.35836 + 0	4.6617 - 6	7.70146 - 1
19100	19043	295.069	1.4216	7.94472	1.3886	9.50620	4.6617	7.70146
19200	19142	295.069	1.4216	7.94472	1.4105	9.65638	4.6617	7.70146
19300	19242	295.069	1.4216	7.94472	1.4328	9.80893	4.6617	7.70146
19400	19341	295.069	1.4216	7.94472	1.4554	9.96387	4.6617	7.70146
19500	19440	295.069	1.4216	7.94472	1.4784	1.01213 + 1	4.6617	7.70146
19600	19540	295.069	1.4216	7.94472	1.5018	1.02811	4.6617	7.70146
19700	19639	295.069	1.4216	7.94472	1.5255	1.04435	4.6617	7.70146
19800	19739	295.069	1.4216	7.94472	1.5496	1.06085	4.6617	7.70146
19900	19838	295.069	1.4216	7.94472	1.5741	1.07760	4.6617	7.70146
20000	19937	295.069	1.4216 - 5	7.94472 - 1	1.5989 - 4	1.09462 + 1	4.6617 - 6	7.70146 - 1
20100	20037	295.094	1.4218	7.94585	1.6247	1.11226	4.6625	7.70268
20200	20136	295.162	1.4224	7.94890	1.6517	1.13077	4.6645	7.70598
20300	20235	295.230	1.4229	7.95195	1.6792	1.14958	4.6665	7.70929
20400	20335	295.297	1.4235	7.95500	1.7071	1.16869	4.6685	7.71259
20500	20434	295.365	1.4240	7.95805	1.7355	1.18811	4.6705	7.71589
20600	20533	295.432	1.4245	7.96110	1.7643	1.20784	4.6725	7.71920
20700	20633	295.500	1.4251	7.96415	1.7936	1.22789	4.6745	7.72250
20800	20732	295.568	1.4256	7.96720	1.8234	1.24827	4.6765	7.72580
20900	20832	295.635	1.4262	7.97024	1.8536	1.26897	4.6784	7.72910
21000	20931	295.703	1.4267 - 5	7.97329 - 1	1.8843 - 4	1.29001 + 1	4.6804 - 6	7.73241 - 1
21100	21030	295.770	1.4273	7.97633	1.9156	1.31138	4.6824	7.73571
21200	21130	295.838	1.4278	7.97938	1.9473	1.33310	4.6844	7.73901
21300	21229	295.905	1.4284	7.98242	1.9795	1.35516	4.6864	7.74231
21400	21328	295.973	1.4289	7.98546	2.0123	1.37758	4.6884	7.74561
21500	21428	296.040	1.4294	7.98851	2.0455	1.40036	4.6904	7.74891
21600	21527	296.107	1.4300	7.99155	2.0793	1.42351	4.6924	7.75220
21700	21626	296.175	1.4305	7.99459	2.1137	1.44702	4.6944	7.75550
21800	21725	296.242	1.4311	7.99763	2.1486	1.47091	4.6964	7.75880
21900	21825	296.309	1.4316	8.00067	2.1841	1.49519	4.6984	7.76210
22000	21924	296.377	1.4322 - 5	8.00371 - 1	2.2201 - 4	1.51985 + 1	4.7004 - 6	7.76540 - 1
22100	22023	296.444	1.4327	8.00675	2.2567	1.54491	4.7024	7.76869
22200	22123	296.511	1.4333	8.00979	2.2939	1.57037	4.7044	7.77199
22300	22222	296.579	1.4338	8.01282	2.3316	1.59623	4.7064	7.77529
22400	22321	296.646	1.4343	8.01586	2.3700	1.62251	4.7084	7.77858
22500	22421	296.713	1.4349	8.01889	2.4090	1.64921	4.7104	7.78188
22600	22520	296.781	1.4354	8.02193	2.4487	1.67633	4.7124	7.78517
22700	22619	296.848	1.4360	8.02496	2.4889	1.70389	4.7144	7.78847
22800	22719	296.915	1.4365	8.02800	2.5298	1.73188	4.7164	7.79176
22900	22818	296.982	1.4371	8.03103	2.5713	1.76032	4.7184	7.79505
23000	22917	297.049	1.4376 - 5	8.03406 - 1	2.6135 - 4	1.78922 + 1	4.7204 - 6	7.79835 - 1
23100	23016	297.116	1.4381	8.03709	2.6564	1.81857	4.7224	7.80164
23200	23116	297.184	1.4387	8.04012	2.7000	1.84839	4.7243	7.80493
23300	23215	297.251	1.4392	8.04315	2.7442	1.87869	4.7263	7.80822
23400	23314	297.318	1.4398	8.04618	2.7892	1.90947	4.7283	7.81152
23500	23413	297.385	1.4403	8.04921	2.8349	1.94073	4.7303	7.81481
23600	23513	297.452	1.4409	8.05224	2.8813	1.97249	4.7323	7.81810
23700	23612	297.519	1.4414	8.05527	2.9284	2.00476	4.7343	7.82139
23800	23711	297.586	1.4419	8.05829	2.9763	2.03754	4.7363	7.82468
23900	23810	297.653	1.4425	8.06132	3.0249	2.07083	4.7383	7.82797
24000	23910	297.720	1.4430 - 5	8.06434 - 1	3.0743 - 4	2.10466 + 1	4.7403 - 6	7.83126 - 1
24100	24009	297.787	1.4436	8.06737	3.1245	2.13902	4.7423	7.83454
24200	24108	297.854	1.4441	8.07039	3.1755	2.17392	4.7443	7.83783
24300	24207	297.921	1.4446	8.07342	3.2273	2.20938	4.7463	7.84112
24400	24307	297.988	1.4452	8.07644	3.2799	2.24540	4.7482	7.84441
24500	24406	298.055	1.4457	8.07946	3.3333	2.28199	4.7502	7.84770
24600	24505	298.122	1.4463	8.08248	3.3876	2.31915	4.7522	7.85098
24700	24604	298.188	1.4468	8.08550	3.4428	2.35690	4.7542	7.85427
24800	24704	298.255	1.4473	8.08852	3.4988	2.39525	4.7562	7.85755
24900	24803	298.322	1.4479	8.09154	3.5557	2.43420	4.7582	7.86084
25000	24902	298.389	1.4484 - 5	8.09456 - 1	3.6135 - 4	2.47377 + 1	4.7602 - 6	7.86413 - 1
25100	25001	298.456	1.4490	8.09758	3.6722	2.51396	4.7622	7.86741
25200	25100	298.523	1.4495	8.10059	3.7318	2.55479	4.7642	7.87069
25300	25200	298.589	1.4500	8.10361	3.7924	2.59625	4.7661	7.87398
25400	25299	298.656	1.4506	8.10663	3.8539	2.63837	4.7681	7.87726
25500	25398	298.723	1.4511	8.10964	3.9164	2.68115	4.7701	7.88054
25600	25497	298.790	1.4517	8.11266	3.9799	2.72461	4.7721	7.88383
25700	25597	298.856	1.4522	8.11567	4.0444	2.76874	4.7741	7.88711
25800	25696	298.923	1.4527	8.11868	4.1098	2.81358	4.7761	7.89039
25900	25795	298.990	1.4533	8.12170	4.1764	2.85911	4.7781	7.89367
26000	25894	299.056	1.4538 - 5	8.12471 - 1	4.2439 - 4	2.90536 + 1	4.7800 - 6	7.89695 - 1
26100	25993	299.123	1.4544	8.12772	4.3125	2.95233	4.7820	7.90023
26200	26092	299.190	1.4549	8.13073	4.3822	3.00004	4.7840	7.90351
26300	26192	299.256	1.4554	8.13374	4.4530	3.04850	4.7860	7.90679
26400	26291	299.323	1.4560	8.13675	4.5249	3.09772	4.7880	7.91007
26500	26390	299.389	1.4565	8.13975	4.5979	3.14771	4.7900	7.91335
26600	26489	299.456	1.4570	8.14276	4.6721	3.19848	4.7920	7.91663
26700	26588	299.522	1.4576	8.14577	4.7474	3.25004	4.7939	7.91991
26800	26687	299.589	1.4581	8.14878	4.8239	3.30241	4.7959	7.92319
26900	26787	299.655	1.4587	8.15178	4.9016	3.35560	4.7979	7.92646



TABLE III. — Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
27000	27115	299.798	1.4598 - 5	8.15825 - 1	5.0729 - 4	3.47289 + 1	4.8022 - 6	7.93352 - 1
27100	27216	299.865	1.4604	8.16128	5.1552	3.52922	4.8042	7.93682
27200	27317	299.932	1.4609	8.16430	5.2388	3.58644	4.8062	7.94012
27300	27418	299.999	1.4614	8.16733	5.3237	3.64456	4.8082	7.94343
27400	27519	300.066	1.4620	8.17036	5.4099	3.70359	4.8102	7.94673
27500	27620	300.133	1.4625	8.17339	5.4975	3.76356	4.8122	7.95003
27600	27720	300.200	1.4631	8.17641	5.5865	3.82446	4.8142	7.95334
27700	27821	300.267	1.4636	8.17944	5.6768	3.88633	4.8162	7.95664
27800	27922	300.334	1.4642	8.18246	5.7686	3.94917	4.8182	7.95994
27900	28023	300.401	1.4647	8.18549	5.8619	4.01299	4.8202	7.96324
28000	28124	300.468	1.4652 - 5	8.18851 - 1	5.9566 - 4	4.07782 + 1	4.8222 - 6	7.96654 - 1
28100	28225	300.535	1.4658	8.19153	6.0527	4.14367	4.8242	7.96984
28200	28326	300.602	1.4663	8.19456	6.1504	4.21054	4.8262	7.97314
28300	28427	300.668	1.4669	8.19758	6.2496	4.27847	4.8282	7.97644
28400	28527	300.735	1.4674	8.20060	6.3504	4.34746	4.8302	7.97974
28500	28628	300.802	1.4679	8.20362	6.4528	4.41753	4.8322	7.98304
28600	28729	300.869	1.4685	8.20664	6.5567	4.48870	4.8342	7.98634
28700	28830	300.936	1.4690	8.20966	6.6623	4.56099	4.8362	7.98964
28800	28931	301.002	1.4696	8.21268	6.7696	4.63440	4.8382	7.99294
28900	29032	301.069	1.4701	8.21570	6.8785	4.70897	4.8401	7.99624
29000	29133	301.136	1.4706 - 5	8.21872 - 1	6.9891 - 4	4.78469 + 1	4.8421 - 6	7.99954 - 1
29100	29234	301.203	1.4712	8.22173	7.1014	4.86161	4.8441	8.00284
29200	29335	301.269	1.4717	8.22475	7.2155	4.93972	4.8461	8.00613
29300	29436	301.336	1.4723	8.22777	7.3314	5.01905	4.8481	8.00943
29400	29537	301.403	1.4728	8.23078	7.4491	5.09962	4.8501	8.01273
29500	29638	301.469	1.4733	8.23380	7.5686	5.18145	4.8521	8.01603
29600	29738	301.536	1.4739	8.23681	7.6900	5.26455	4.8541	8.01932
29700	29839	301.603	1.4744	8.23983	7.8133	5.34895	4.8561	8.02262
29800	29940	301.669	1.4750	8.24284	7.9385	5.43466	4.8581	8.02591
29900	30041	301.736	1.4755	8.24585	8.0657	5.52170	4.8601	8.02921
30000	30142	301.802	1.4760 - 5	8.24886 - 1	8.1948 - 4	5.61011 + 1	4.8621 - 6	8.03250 - 1
30100	30243	301.869	1.4766	8.25188	8.3259	5.69988	4.8641	8.03580
30200	30344	301.936	1.4771	8.25489	8.4591	5.79106	4.8661	8.03909
30300	30445	302.002	1.4777	8.25790	8.5944	5.88364	4.8681	8.04239
30400	30546	302.069	1.4782	8.26091	8.7317	5.97767	4.8701	8.04568
30500	30647	302.135	1.4787	8.26392	8.8712	6.07316	4.8721	8.04897
30600	30748	302.202	1.4793	8.26693	9.0128	6.17013	4.8741	8.05227
30700	30849	302.268	1.4798	8.26993	9.1567	6.26860	4.8761	8.05556
30800	30950	302.335	1.4803	8.27294	9.3027	6.36861	4.8780	8.05885
30900	31051	302.401	1.4809	8.27595	9.4511	6.47015	4.8800	8.06215
31000	31152	302.467	1.4814 - 5	8.27895 - 1	9.6017 - 4	6.57328 + 1	4.8820 - 6	8.06544 - 1
31100	31253	302.534	1.4820	8.28196	9.7547	6.67800	4.8840	8.06873
31200	31354	302.600	1.4825	8.28496	9.9100	6.78434	4.8860	8.07202
31300	31455	302.667	1.4830	8.28797	1.0068 - 3	6.89233	4.8880	8.07531
31400	31556	302.733	1.4836	8.29097	1.0228	7.00199	4.8900	8.07860
31500	31657	302.799	1.4841	8.29398	1.0391	7.11334	4.8920	8.08189
31600	31758	302.866	1.4846	8.29698	1.0556	7.22642	4.8940	8.08518
31700	31859	302.932	1.4852	8.29998	1.0723	7.34123	4.8960	8.08847
31800	31960	302.998	1.4857	8.30298	1.0894	7.45783	4.8980	8.09176
31900	32061	303.065	1.4863	8.30598	1.1067	7.57622	4.9000	8.09505
32000	32162	303.131	1.4868 - 5	8.30899 - 1	1.1242 - 3	7.69644 + 1	4.9020 - 6	8.09834 - 1
32100	32263	303.197	1.4873	8.31200	1.1415	7.81809	4.9040	8.10163
32200	32364	303.264	1.4878	8.31501	1.1588	7.94243	4.9060	8.10492
32300	32465	303.331	1.4883	8.31802	1.1761	8.06869	4.9080	8.10821
32400	32566	303.397	1.4888	8.32103	1.1934	8.19606	4.9100	8.11150
32500	32667	303.464	1.4893	8.32404	1.2107	8.32454	4.9120	8.11479
32600	32768	303.531	1.4898	8.32705	1.2280	8.45402	4.9140	8.11808
32700	32869	303.598	1.4903	8.33006	1.2453	8.58450	4.9160	8.12137
32800	32970	303.665	1.4908	8.33307	1.2626	8.71598	4.9180	8.12466
32900	33071	303.732	1.4913	8.33608	1.2799	8.84846	4.9200	8.12795
33000	33172	303.799	1.4918	8.33909	1.2972	8.98194	4.9220	8.13124
33100	33273	303.866	1.4923	8.34210	1.3145	9.11642	4.9240	8.13453
33200	33374	303.933	1.4928	8.34511	1.3318	9.25190	4.9260	8.13782
33300	33475	304.000	1.4933	8.34812	1.3491	9.38838	4.9280	8.14111
33400	33576	304.067	1.4938	8.35113	1.3664	9.52586	4.9300	8.14440
33500	33677	304.134	1.4943	8.35414	1.3837	9.66434	4.9320	8.14769
33600	33778	304.201	1.4948	8.35715	1.4010	9.80382	4.9340	8.15098
33700	33879	304.268	1.4953	8.36016	1.4183	9.94430	4.9360	8.15427
33800	33980	304.335	1.4958	8.36317	1.4356	10.08578	4.9380	8.15756
33900	34081	304.402	1.4963	8.36618	1.4529	10.22826	4.9400	8.16085
34000	34182	304.469	1.4968	8.36919	1.4702	10.37174	4.9420	8.16414
34100	34283	304.536	1.4973	8.37220	1.4875	10.51622	4.9440	8.16743
34200	34384	304.603	1.4978	8.37521	1.5048	10.66170	4.9460	8.17072
34300	34485	304.670	1.4983	8.37822	1.5221	10.80818	4.9480	8.17401
34400	34586	304.737	1.4988	8.38123	1.5394	10.95566	4.9500	8.17730
34500	34687	304.804	1.4993	8.38424	1.5567	11.10414	4.9520	8.18059
34600	34788	304.871	1.4998	8.38725	1.5740	11.25362	4.9540	8.18388
34700	34889	304.938	1.5003	8.39026	1.5913	11.40410	4.9560	8.18717
34800	34990	305.005	1.5008	8.39327	1.6086	11.55558	4.9580	8.19046
34900	35091	305.072	1.5013	8.39628	1.6259	11.70806	4.9600	8.19375
35000	35192	305.139	1.5018	8.39929	1.6432	11.86154	4.9620	8.19704
35100	35293	305.206	1.5023	8.40230	1.6605	12.01602	4.9640	8.20033
35200	35394	305.273	1.5028	8.40531	1.6778	12.17150	4.9660	8.20362
35300	35495	305.340	1.5033	8.40832	1.6951	12.32798	4.9680	8.20691
35400	35596	305.407	1.5038	8.41133	1.7124	12.48546	4.9700	8.21020
35500	35697	305.474	1.5043	8.41434	1.7297	12.64394	4.9720	8.21349
35600	35798	305.541	1.5048	8.41735	1.7470	12.80342	4.9740	8.21678
35700	35899	305.608	1.5053	8.42036	1.7643	12.96390	4.9760	8.22007
35800	35900	305.675	1.5058	8.42337	1.7816	13.12538	4.9780	8.22336
35900	36001	305.742	1.5063	8.42638	1.7989	13.28786	4.9800	8.22665
36000	36102	305.809	1.5068	8.42939	1.8162	13.45134	4.9820	8.22994
36100	36203	305.876	1.5073	8.43240	1.8335	13.61582	4.9840	8.23323
36200	36304	305.943	1.5078	8.43541	1.8508	13.78130	4.9860	8.23652
36300	36405	306.010	1.5083	8.43842	1.8681	13.94778	4.9880	8.23981
36400	36506	306.077	1.5088	8.44143	1.8854	14.11526	4.9900	8.24310
36500	36607	306.144	1.5093	8.44444	1.9027	14.28374	4.9920	8.24639
36600	36708	306.211	1.5098	8.44745	1.9200	14.45322	4.9940	8.24968
36700	36809	306.278	1.5103	8.45046	1.9373	14.62370	4.9960	8.25297
36800	36910	306.345	1.5108	8.45347	1.9546	14.79518	4.9980	8.25626
36900	37011	306.412	1.5113	8.45648	1.9719	14.96766	4.9999	8.25955
37000	37112	306.479	1.5118	8.45949	1.9892	15.14114	5.0019	8.26284
37100	37213	306.546	1.5123	8.46250	2.0065	15.31562	5.0039	8.26613
37200	37314	306.613	1.5128	8.46551	2.0238	15.49110	5.0059	8.26942
37300	37415	306.680	1.5133	8.46852	2.0411	15.66758	5.0079	8.27271
37400	37516	306.747	1.5138	8.47153	2.0584	15.84506	5.0099	8.27600
37500	37617	306.814	1.5143	8.47454	2.0757	16.02354	5.0119	8.27929
37600	37718	306.881	1.5148	8.47755	2.0930	16.20302	5.0139	8.28258
37700	37819	306.948	1.5153	8.48056	2.1103	16.38350	5.0159	8.28587
37800	37920	307.015	1.5158	8.48357	2.1276	16.56498	5.0179	8.28916

TABLE III. — Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k-cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
27000	26886	299.722	1.4592 - 5	8.15479 - 1	4.9805 - 4	3.40962 + 1	4.7999 - 6	7.92974 - 1
27100	26985	299.788	1.4597	8.15779	5.0606	3.46448	4.8019	7.93302
27200	27084	299.855	1.4603	8.16079	5.1420	3.52020	4.8039	7.93629
27300	27183	299.921	1.4608	8.16380	5.2247	3.57678	4.8058	7.93957
27400	27282	299.988	1.4614	8.16680	5.3086	3.63426	4.8078	7.94284
27500	27382	300.054	1.4619	8.16980	5.3939	3.69262	4.8098	7.94612
27600	27481	300.120	1.4624	8.17280	5.4805	3.75189	4.8118	7.94939
27700	27580	300.187	1.4630	8.17580	5.5684	3.81209	4.8138	7.95267
27800	27679	300.253	1.4635	8.17880	5.6577	3.87322	4.8158	7.95594
27900	27778	300.319	1.4640	8.18180	5.7484	3.93530	4.8177	7.95922
28000	27877	300.386	1.4646 - 5	8.18480 - 1	5.8405 - 4	3.99835 + 1	4.8197 - 6	7.96249 - 1
28100	27976	300.452	1.4651	8.18780	5.9340	4.06238	4.8217	7.96576
28200	28075	300.518	1.4656	8.19079	6.0290	4.12740	4.8237	7.96904
28300	28175	300.585	1.4662	8.19379	6.1254	4.19343	4.8257	7.97230
28400	28274	300.651	1.4667	8.19678	6.2234	4.26048	4.8276	7.97558
28500	28373	300.717	1.4673	8.19978	6.3228	4.32857	4.8296	7.97885
28600	28472	300.783	1.4678	8.20277	6.4238	4.39772	4.8316	7.98212
28700	28571	300.850	1.4683	8.20577	6.5264	4.46794	4.8336	7.98539
28800	28670	300.916	1.4689	8.20876	6.6306	4.53925	4.8356	7.98866
28900	28769	300.982	1.4694	8.21175	6.7363	4.61166	4.8375	7.99193
29000	28868	301.048	1.4699 - 5	8.21474 - 1	6.8438 - 4	4.68519 + 1	4.8395 - 6	7.99519 - 1
29100	28967	301.114	1.4705	8.21773	6.9528	4.75986	4.8415	7.99846
29200	29066	301.180	1.4710	8.22072	7.0636	4.83568	4.8435	8.00173
29300	29166	301.246	1.4715	8.22371	7.1760	4.91267	4.8454	8.00500
29400	29265	301.312	1.4721	8.22670	7.2902	4.99085	4.8474	8.00827
29500	29364	301.379	1.4726	8.22969	7.4062	5.07024	4.8494	8.01153
29600	29463	301.445	1.4731	8.23268	7.5240	5.15085	4.8514	8.01480
29700	29562	301.511	1.4737	8.23566	7.6435	5.23271	4.8534	8.01806
29800	29661	301.577	1.4742	8.23865	7.7649	5.31582	4.8553	8.02133
29900	29760	301.643	1.4747	8.24163	7.8882	5.40022	4.8573	8.02460
30000	29859	301.709	1.4753 - 5	8.24462 - 1	8.0134 - 4	5.48591 + 1	4.8593 - 6	8.02786 - 1
30100	29958	301.775	1.4758	8.24760	8.1405	5.57293	4.8613	8.03112
30200	30057	301.841	1.4763	8.25059	8.2695	5.66128	4.8632	8.03439
30300	30156	301.906	1.4769	8.25357	8.4006	5.75099	4.8652	8.03765
30400	30255	301.972	1.4774	8.25655	8.5336	5.84208	4.8672	8.04091
30500	30354	302.038	1.4779	8.25953	8.6687	5.93456	4.8692	8.04418
30600	30453	302.104	1.4785	8.26251	8.8059	6.02847	4.8711	8.04744
30700	30552	302.170	1.4790	8.26549	8.9452	6.12381	4.8731	8.05070
30800	30651	302.236	1.4795	8.26847	9.0866	6.22062	4.8751	8.05396
30900	30751	302.302	1.4801	8.27145	9.2302	6.31892	4.8771	8.05722
31000	30850	302.368	1.4806 - 5	8.27443 - 1	9.3759 - 4	6.41872 + 1	4.8790 - 6	8.06048 - 1
31100	30949	302.433	1.4811	8.27741	9.5240	6.52004	4.8810	8.06375
31200	31048	302.499	1.4817	8.28038	9.6742	6.62292	4.8830	8.06701
31300	31147	302.565	1.4822	8.28336	9.8268	6.72738	4.8850	8.07026
31400	31246	302.631	1.4827	8.28634	9.9817	6.83342	4.8869	8.07352
31500	31345	302.696	1.4833	8.28931	1.0139 - 3	6.94109	4.8889	8.07678
31600	31444	302.762	1.4838	8.29229	1.0299	7.05041	4.8909	8.08004
31700	31543	302.828	1.4843	8.29526	1.0461	7.16139	4.8928	8.08330
31800	31642	302.893	1.4849	8.29823	1.0625	7.27407	4.8948	8.08656
31900	31741	302.959	1.4854	8.30120	1.0792	7.38847	4.8968	8.08981
32000	31840	303.025	1.4859 - 5	8.30418 - 1	1.0962 - 3	7.50461 + 1	4.8988 - 6	8.09307 - 1
32100	31939	303.091	1.4864	8.31215	1.1315	7.74642	4.9041	8.10181
32200	32038	303.156	1.4903	8.32877	1.1706	8.01392	4.9151	8.12004
32300	32137	303.222	1.4933	8.34537	1.2109	8.28995	4.9261	8.13825
32400	32236	303.288	1.4963	8.36195	1.2525	8.57476	4.9371	8.15645
32500	32335	303.354	1.4992	8.37852	1.2955	8.86861	4.9481	8.17465
32600	32434	303.420	1.5022	8.39506	1.3397	9.17176	4.9591	8.19283
32700	32533	303.486	1.5052	8.41159	1.3854	9.48447	4.9701	8.21100
32800	32632	303.552	1.5081	8.42810	1.4325	9.80703	4.9811	8.22916
32900	32731	303.618	1.5111	8.44459	1.4811	1.01397 + 2	4.9921	8.24731
33000	32830	303.684	1.5140 - 5	8.46106 - 1	1.5312 - 3	1.04828 + 2	5.0031 - 6	8.26545 - 1
33100	32929	303.750	1.5169	8.47751	1.5829	1.08367	5.0141	8.28358
33200	33028	303.816	1.5199	8.49394	1.6362	1.12015	5.0250	8.30170
33300	33127	303.882	1.5228	8.51036	1.6912	1.15777	5.0360	8.31980
33400	33226	303.948	1.5258	8.52676	1.7478	1.19656	5.0470	8.33790
33500	33325	304.014	1.5287	8.54314	1.8062	1.23654	5.0579	8.35599
33600	33424	304.080	1.5316	8.55950	1.8665	1.27776	5.0688	8.37406
33700	33523	304.146	1.5345	8.57584	1.9285	1.32025	5.0798	8.39213
33800	33622	304.212	1.5375	8.59217	1.9925	1.36405	5.0907	8.41018
33900	33721	304.278	1.5404	8.60847	2.0584	1.40918	5.1016	8.42822
34000	33820	304.344	1.5433 - 5	8.62476 - 1	2.1264 - 3	1.45570 + 2	5.1125 - 6	8.44625 - 1
34100	33919	304.410	1.5462	8.64103	2.1964	1.50363	5.1235	8.46428
34200	34018	304.476	1.5491	8.65729	2.2685	1.55302	5.1344	8.48229
34300	34117	304.542	1.5520	8.67352	2.3429	1.60391	5.1452	8.50029
34400	34216	304.608	1.5549	8.68974	2.4194	1.65633	5.1561	8.51828
34500	34315	304.674	1.5578	8.70594	2.4983	1.71034	5.1670	8.53625
34600	34414	304.740	1.5607	8.72212	2.5796	1.76598	5.1779	8.55422
34700	34513	304.806	1.5636	8.73829	2.6633	1.82328	5.1888	8.57218
34800	34612	304.872	1.5665	8.75443	2.7495	1.88231	5.1996	8.59013
34900	34711	304.938	1.5694	8.77056	2.8383	1.94309	5.2105	8.60806

TABLE III. — Continued  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	C <sub>s</sub> , m sec <sup>-1</sup>	μ, kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	η, m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k·cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
38000	38229	314.070	1.5756 - 5	8.80506 - 1	3.0376 - 3	2.07951 + 2	5.2337 - 6	8.64646 - 1
38200	38431	314.428	1.5785	8.82133	3.1361	2.14699	5.2447	8.66458
38400	38633	314.786	1.5814	8.83758	3.2377	2.21648	5.2557	8.68269
38600	38836	315.143	1.5843	8.85382	3.3422	2.28806	5.2666	8.70079
38800	39038	315.500	1.5872	8.87004	3.4499	2.36178	5.2776	8.71887
39000	39241	315.856	1.5901	8.88624	3.5608	2.43769	5.2885	8.73695
39200	39443	316.212	1.5930	8.90242	3.6750	2.51587	5.2994	8.75502
39400	39646	316.568	1.5959	8.91859	3.7926	2.59636	5.3104	8.77308
39600	39848	316.923	1.5988	8.93474	3.9136	2.67924	5.3213	8.79113
39800	40051	317.278	1.6017	8.95088	4.0383	2.76456	5.3322	8.80917
40000	40253	317.633	1.6045 - 5	8.96700 - 1	4.1666 - 3	2.85240 + 2	5.3431 - 6	8.82721 - 1
40200	40456	317.987	1.6074	8.98310	4.2986	2.94282	5.3540	8.84523
40400	40658	318.340	1.6103	8.99919	4.4346	3.03590	5.3649	8.86324
40600	40861	318.694	1.6132	9.01525	4.5745	3.13170	5.3758	8.88124
40800	41064	319.046	1.6160	9.03131	4.7186	3.23029	5.3867	8.89923
41000	41266	319.399	1.6189	9.04734	4.8668	3.33176	5.3976	8.91721
41200	41469	319.751	1.6218	9.06336	5.0193	3.43618	5.4085	8.93518
41400	41671	320.103	1.6246	9.07937	5.1762	3.54363	5.4194	8.95314
41600	41874	320.454	1.6275	9.09536	5.3377	3.65418	5.4302	8.97110
41800	42077	320.805	1.6304	9.11133	5.5039	3.76793	5.4411	8.98904
42000	42279	321.156	1.6332 - 5	9.12728 - 1	5.6748 - 3	3.88496 + 2	5.4519 - 6	9.00697 - 1
42200	42482	321.506	1.6361	9.14322	5.8507	4.00534	5.4628	9.02489
42400	42685	321.856	1.6389	9.15915	6.0316	4.12918	5.4736	9.04281
42600	42887	322.205	1.6418	9.17506	6.2177	4.25657	5.4845	9.06071
42800	43090	322.554	1.6446	9.19095	6.4090	4.38759	5.4953	9.07860
43000	43293	322.903	1.6475	9.20682	6.6059	4.52234	5.5061	9.09649
43200	43496	323.251	1.6503	9.22268	6.8083	4.66093	5.5170	9.11436
43400	43698	323.599	1.6531	9.23853	7.0165	4.80344	5.5278	9.13223
43600	43901	323.946	1.6560	9.25436	7.2305	4.94999	5.5386	9.15008
43800	44104	324.294	1.6588	9.27017	7.4507	5.10067	5.5494	9.16792
44000	44307	324.640	1.6616 - 5	9.28597 - 1	7.6770 - 3	5.25560 + 2	5.5602 - 6	9.18576 - 1
44200	44510	324.987	1.6644	9.30175	7.9096	5.41488	5.5710	9.20358
44400	44712	325.333	1.6673	9.31751	8.1488	5.57863	5.5817	9.22140
44600	44915	325.679	1.6701	9.33326	8.3947	5.74697	5.5925	9.23921
44800	45118	326.024	1.6729	9.34900	8.6475	5.92000	5.6033	9.25700
45000	45321	326.369	1.6757	9.36471	8.9073	6.09786	5.6141	9.27479
45200	45524	326.714	1.6785	9.38042	9.1743	6.28066	5.6248	9.29256
45400	45727	327.058	1.6813	9.39611	9.4487	6.46854	5.6356	9.31033
45600	45930	327.402	1.6841	9.41178	9.7307	6.66161	5.6463	9.32809
45800	46132	327.745	1.6869	9.42743	1.0021 - 2	6.86002	5.6571	9.34583
46000	46335	328.088	1.6897 - 5	9.44308 - 1	1.0318 - 2	7.06390 + 2	5.6678 - 6	9.36357 - 1
46200	46538	328.431	1.6925	9.45870	1.0624	7.27338	5.6785	9.38130
46400	46741	328.773	1.6953	9.47431	1.0939	7.48862	5.6893	9.39902
46600	46944	329.116	1.6981	9.48991	1.1262	7.70975	5.7000	9.41672
46800	47147	329.457	1.7009	9.50549	1.1594	7.93692	5.7107	9.43442
47000	47350	329.799	1.7037	9.52105	1.1935	8.17029	5.7214	9.45211
47200	47553	329.799	1.7037	9.52105	1.2240	8.37918	5.7214	9.45211
47400	47756	329.799	1.7037	9.52105	1.2553	8.59340	5.7214	9.45211
47600	47959	329.799	1.7037	9.52105	1.2873	8.81311	5.7214	9.45211
47800	48162	329.799	1.7037	9.52105	1.3203	9.03843	5.7214	9.45211
48000	48365	329.799	1.7037 - 5	9.52105 - 1	1.3540 - 2	9.26951 + 2	5.7214 - 6	9.45211 - 1
48200	48568	329.799	1.7037	9.52105	1.3886	9.50651	5.7214	9.45211
48400	48771	329.799	1.7037	9.52105	1.4241	9.74956	5.7214	9.45211
48600	48974	329.799	1.7037	9.52105	1.4605	9.99882	5.7214	9.45211
48800	49178	329.799	1.7037	9.52105	1.4979	1.02545 + 3	5.7214	9.45211
49000	49381	329.799	1.7037	9.52105	1.5362	1.05166	5.7214	9.45211
49200	49584	329.799	1.7037	9.52105	1.5755	1.07855	5.7214	9.45211
49400	49787	329.799	1.7037	9.52105	1.6157	1.10613	5.7214	9.45211
49600	49990	329.799	1.7037	9.52105	1.6570	1.13441	5.7214	9.45211
49800	50193	329.799	1.7037	9.52105	1.6994	1.16341	5.7214	9.45211
50000	50396	329.799	1.7037 - 5	9.52105 - 1	1.7429 - 2	1.19315 + 3	5.7214 - 6	9.45211 - 1
50500	50904	329.799	1.7037	9.52105	1.8564	1.27088	5.7214	9.45211
51000	51413	329.799	1.7037	9.52105	1.9773	1.35368	5.7214	9.45211
51500	51921	329.799	1.7037	9.52105	2.1062	1.44187	5.7214	9.45211
52000	52429	329.799	1.7037	9.52105	2.2434	1.53580	5.7214	9.45211
52500	52937	329.189	1.6987	9.49325	2.3740	1.62524	5.7023	9.42052
53000	53446	328.578	1.6937	9.46539	2.5128	1.72025	5.6831	9.38889
53500	53954	327.966	1.6887	9.43749	2.6602	1.82119	5.6640	9.35724
54000	54463	327.353	1.6837	9.40954	2.8169	1.92846	5.6448	9.32555
54500	54971	326.738	1.6787	9.38154	2.9835	2.04247	5.6256	9.29383
55000	55480	326.123	1.6737 - 5	9.35349 - 1	3.1606 - 2	2.16370 + 3	5.6064 - 6	9.26208 - 1
55500	55989	325.506	1.6687	9.32539	3.3489	2.29261	5.5871	9.23030
56000	56498	324.888	1.6636	9.29724	3.5492	2.42973	5.5679	9.19849
56500	57007	324.269	1.6586	9.26904	3.7622	2.57561	5.5486	9.16665
57000	57516	323.649	1.6535	9.24079	3.9890	2.73085	5.5293	9.13478
57500	58025	323.027	1.6485	9.21249	4.2304	2.89610	5.5100	9.10287
58000	58534	322.405	1.6434	9.18414	4.4874	3.07203	5.4907	9.07094
58500	59043	321.781	1.6383	9.15574	4.7610	3.25938	5.4713	9.03897
59000	59553	321.156	1.6332	9.12728	5.0525	3.45894	5.4519	9.00697
59500	60062	320.529	1.6281	9.09878	5.3631	3.67156	5.4326	8.97494

TABLE III. — Continued  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	μ, kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	η, m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k·cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
38000	37774	313.665	1.5723 - 5	8.78667 - 1	2.9298 - 3	2.00569 + 2	5.2213 - 6	8.62599 - 1
38200	37972	314.019	1.5751	8.80277	3.0239	2.07016	5.2322	8.64390
38400	38169	314.373	1.5780	8.81884	3.1209	2.13653	5.2430	8.66181
38600	38367	314.727	1.5809	8.83490	3.2207	2.20487	5.2538	8.67970
38800	38565	315.080	1.5838	8.85094	3.3235	2.27523	5.2647	8.69758
39000	38762	315.432	1.5866	8.86697	3.4293	2.34766	5.2755	8.71545
39200	38960	315.785	1.5895	8.88298	3.5382	2.42222	5.2863	8.73331
39400	39157	316.136	1.5924	8.89897	3.6503	2.49897	5.2971	8.75116
39600	39355	316.488	1.5952	8.91494	3.7657	2.57797	5.3079	8.76900
39800	39552	316.839	1.5981	8.93090	3.8844	2.65926	5.3187	8.78683
40000	39750	317.189	1.6009 - 5	8.94683 - 1	4.0067 - 3	2.74293 + 2	5.3295 - 6	8.80465 - 1
40200	39947	317.539	1.6038	8.96275	4.1324	2.82903	5.3403	8.82246
40400	40145	317.889	1.6066	8.97866	4.2618	2.91762	5.3510	8.84026
40600	40342	318.238	1.6095	8.99455	4.3950	3.00877	5.3618	8.85804
40800	40540	318.587	1.6123	9.01042	4.5320	3.10255	5.3726	8.87582
41000	40737	318.936	1.6151	9.02627	4.6729	3.19904	5.3833	8.89358
41200	40935	319.284	1.6180	9.04211	4.8179	3.29829	5.3941	8.91134
41400	41132	319.632	1.6208	9.05793	4.9670	3.40038	5.4048	8.92908
41600	41329	319.979	1.6236	9.07373	5.1204	3.50540	5.4155	8.94681
41800	41527	320.326	1.6265	9.08951	5.2782	3.61341	5.4263	8.96454
42000	41724	320.672	1.6293 - 5	9.10528 - 1	5.4404 - 3	3.72449 + 2	5.4370 - 6	8.98225 - 1
42200	41922	321.018	1.6321	9.12104	5.6073	3.83872	5.4477	8.99995
42400	42119	321.364	1.6349	9.13677	5.7789	3.95619	5.4584	9.01764
42600	42316	321.709	1.6377	9.15249	5.9553	4.07698	5.4691	9.03532
42800	42514	322.054	1.6405	9.16820	6.1367	4.20117	5.4798	9.05299
43000	42711	322.399	1.6433	9.18388	6.3233	4.32886	5.4905	9.07065
43200	42908	322.743	1.6461	9.19955	6.5150	4.46013	5.5012	9.08829
43400	43106	323.087	1.6490	9.21520	6.7121	4.59507	5.5118	9.10593
43600	43303	323.430	1.6517	9.23084	6.9147	4.73379	5.5225	9.12356
43800	43500	323.773	1.6545	9.24646	7.1230	4.87637	5.5332	9.14117
44000	43697	324.116	1.6573 - 5	9.26207 - 1	7.3371 - 3	5.02292 + 2	5.5438 - 6	9.15878 - 1
44200	43895	324.458	1.6601	9.27765	7.5571	5.17353	5.5545	9.17638
44400	44092	324.800	1.6629	9.29323	7.7832	5.32831	5.5651	9.19396
44600	44289	325.141	1.6657	9.30878	8.0155	5.48737	5.5758	9.21153
44800	44486	325.482	1.6685	9.32432	8.2543	5.65081	5.5864	9.22910
45000	44684	325.823	1.6713	9.33984	8.4996	5.81875	5.5970	9.24665
45200	44881	326.163	1.6740	9.35535	8.7516	5.99129	5.6076	9.26419
45400	45078	326.503	1.6768	9.37084	9.0105	6.16856	5.6183	9.28172
45600	45275	326.843	1.6796	9.38632	9.2766	6.35068	5.6289	9.29924
45800	45472	327.182	1.6823	9.40177	9.5498	6.53775	5.6395	9.31675
46000	45669	327.521	1.6851 - 5	9.41722 - 1	9.8305 - 3	6.72992 + 2	5.6501 - 6	9.33425 - 1
46200	45867	327.859	1.6879	9.43264	1.0119 - 2	6.92730	5.6606	9.35174
46400	46064	328.198	1.6906	9.44806	1.0415	7.13002	5.6712	9.36922
46600	46261	328.535	1.6934	9.46345	1.0719	7.33823	5.6818	9.38669
46800	46458	328.873	1.6961	9.47883	1.1031	7.55204	5.6924	9.40415
47000	46655	329.210	1.6989	9.49419	1.1352	7.77161	5.7029	9.42159
47200	46852	329.546	1.7016	9.50954	1.1681	7.99707	5.7135	9.43903
47400	47049	329.799	1.7037	9.52105	1.2009	8.22111	5.7214	9.45211
47600	47246	329.799	1.7037	9.52105	1.2311	8.42815	5.7214	9.45211
47800	47443	329.799	1.7037	9.52105	1.2621	8.64039	5.7214	9.45211
48000	47640	329.799	1.7037 - 5	9.52105 - 1	1.2939 - 2	8.85796 + 2	5.7214 - 6	9.45211 - 1
48200	47837	329.799	1.7037	9.52105	1.3265	9.08100	5.7214	9.45211
48400	48034	329.799	1.7037	9.52105	1.3599	9.30964	5.7214	9.45211
48600	48231	329.799	1.7037	9.52105	1.3941	9.54402	5.7214	9.45211
48800	48428	329.799	1.7037	9.52105	1.4292	9.78428	5.7214	9.45211
49000	48625	329.799	1.7037	9.52105	1.4652	1.00306 + 3	5.7214	9.45211
49200	48822	329.799	1.7037	9.52105	1.5021	1.02831	5.7214	9.45211
49400	49019	329.799	1.7037	9.52105	1.5399	1.05419	5.7214	9.45211
49600	49216	329.799	1.7037	9.52105	1.5786	1.08072	5.7214	9.45211
49800	49413	329.799	1.7037	9.52105	1.6184	1.10792	5.7214	9.45211
50000	49610	329.799	1.7037 - 5	9.52105 - 1	1.6591 - 2	1.13580 + 3	5.7214 - 6	9.45211 - 1
50200	50102	329.799	1.7037	9.52105	1.7654	1.20860	5.7214	9.45211
50400	50594	329.799	1.7037	9.52105	1.8786	1.28606	5.7214	9.45211
50600	51086	329.799	1.7037	9.52105	1.9989	1.36846	5.7214	9.45211
50800	51578	329.799	1.7037	9.52105	2.1270	1.45614	5.7214	9.45211
51000	52070	329.713	1.7030	9.51717	2.2612	1.54798	5.7187	9.44770
51200	52562	329.114	1.6981	9.48981	2.3907	1.63666	5.6999	9.41662
51400	53053	328.513	1.6932	9.46241	2.5281	1.73074	5.6811	9.38551
51600	53545	327.911	1.6883	9.43497	2.6740	1.83059	5.6622	9.35438
51800	54037	327.308	1.6834	9.40749	2.8288	1.93658	5.6434	9.32323
52000	54528	326.703	1.6784 - 5	9.37996 - 1	2.9932 - 2	2.04910 + 3	5.6245 - 6	9.29205 - 1
52200	55020	326.098	1.6735	9.35239	3.1677	2.16859	5.6056	9.26084
52400	55511	325.492	1.6686	9.32478	3.3531	2.29551	5.5867	9.22961
52600	56002	324.885	1.6636	9.29712	3.5500	2.43034	5.5678	9.19835
52800	56493	324.277	1.6587	9.26941	3.7593	2.57361	5.5489	9.16707
53000	56984	323.668	1.6537	9.24167	3.9818	2.72589	5.5299	9.13577
53200	57476	323.058	1.6487	9.21388	4.2182	2.88776	5.5109	9.10444
53400	57966	322.446	1.6437	9.18604	4.4696	3.05988	5.4920	9.07308
53600	58457	321.834	1.6387	9.15816	4.7370	3.24293	5.4730	9.04170
53800	58948	321.220	1.6337	9.13024	5.0214	3.43765	5.4540	9.01029



TABLE III. — Concluded  
GEOPOTENTIAL ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, m	Z, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k·cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
60000	60572	319.902	1.6230 - 5	9.07023 - 1	5.6941 - 2	3.89814 + 3	5.4132 - 6	8.94288 - 1
60500	61081	319.273	1.6179	9.04162	6.0469	4.13968	5.3937	8.91079
61000	61591	318.643	1.6128	9.01296	6.4231	4.39720	5.3743	8.87867
61500	62101	317.379	1.6025	8.95549	6.7763	4.63902	5.3553	8.84433
62000	62611	316.111	1.5922	8.89780	7.1519	4.89617	5.2963	8.74986
62500	63121	314.837	1.5818	8.83990	7.5516	5.16975	5.2572	8.68527
63000	63631	313.558	1.5714	8.78179	7.9769	5.46095	5.2180	8.62056
63500	64141	312.273	1.5610	8.72347	8.4299	5.77108	5.1788	8.55572
64000	64651	310.984	1.5505	8.66492	8.9126	6.10151	5.1395	8.49075
64500	65161	309.689	1.5400	8.60616	9.4271	6.45376	5.1001	8.42566
65000	65672	308.388	1.5294 - 5	8.54718 - 1	9.9760 - 2	6.82948 + 3	5.0606 - 6	8.36045 - 1
65500	66182	307.083	1.5188	8.48797	1.0562 - 1	7.23042	5.0211	8.29511
66000	66693	305.771	1.5082	8.42853	1.1187	7.65852	4.9814	8.22964
66500	67203	304.454	1.4975	8.36887	1.1855	8.11587	4.9417	8.16405
67000	67714	303.131	1.4868	8.30899	1.2569	8.60473	4.9020	8.09834
67500	68225	301.802	1.4760	8.24886	1.3333	9.12757	4.8621	8.03250
68000	68735	300.468	1.4652	8.18851	1.4150	9.68707	4.8222	7.96654
68500	69246	299.127	1.4544	8.12792	1.5025	1.02862 + 4	4.7822	7.90046
69000	69757	297.781	1.4435	8.06710	1.5963	1.09280	4.7421	7.83425
69500	70268	296.428	1.4326	8.00603	1.6968	1.16161	4.7019	7.76792
70000	70780	295.069	1.4216 - 5	7.94472 - 1	1.8046 - 1	1.23543 + 4	4.6617 - 6	7.70146 - 1
70500	71291	293.704	1.4106	7.88317	1.9203	1.31466	4.6214	7.63488
71000	71802	292.333	1.3995	7.82138	2.0446	1.39975	4.5810	7.56818
71500	72314	290.955	1.3884	7.75933	2.1782	1.49121	4.5406	7.50136
72000	72825	289.570	1.3773	7.69704	2.3219	1.58958	4.5001	7.43442
72500	73337	288.179	1.3661	7.63449	2.4766	1.69543	4.4595	7.36735
73000	73848	286.781	1.3549	7.57169	2.6431	1.80944	4.4188	7.30017
73500	74360	285.376	1.3436	7.50864	2.8225	1.93230	4.3781	7.23286
74000	74872	283.965	1.3323	7.44532	3.0161	2.06480	4.3373	7.16544
74500	75384	282.546	1.3209	7.38174	3.2250	2.20780	4.2964	7.09789
75000	75896	281.12	1.309 - 5	7.3179 - 1	3.451 - 1	2.3623 + 4	4.255 - 6	7.0302 - 1
75500	76408	279.69	1.298	7.2538	3.694	2.5292	4.214	6.9625
76000	76920	278.25	1.286	7.1894	3.958	2.7098	4.173	6.8946
76500	77432	276.80	1.275	7.1248	4.244	2.9053	4.132	6.8265
77000	77944	275.34	1.263	7.0599	4.553	3.1171	4.091	6.7584
77500	78457	273.88	1.252	6.9947	4.889	3.3468	4.050	6.6902
78000	78969	272.41	1.240	6.9292	5.253	3.5960	4.008	6.6218
78500	79482	270.93	1.228	6.8635	5.648	3.8668	3.967	6.5534
79000	79994	269.44	1.216	6.7974	6.078	4.1611	3.925	6.4848
79500	80507	269.44	1.216	6.7974	6.681	4.5738	3.925	6.4848
80000	81020	269.44	1.216 - 5	6.7974 - 1	7.344 - 1	5.0274 + 4	3.925 - 6	6.4848 - 1
80500	81533	269.44	1.216	6.7974	8.072	5.5259	3.925	6.4848
81000	82046	269.44	1.216	6.7974	8.872	6.0739	3.925	6.4848
81500	82559	269.44	1.216	6.7974	9.752	6.6763	3.925	6.4848
82000	83072	269.44	1.216	6.7974	1.072 + 0	7.3384	3.925	6.4848
82500	83585	269.44	1.216	6.7974	1.178	8.0661	3.925	6.4848
83000	84098	269.44	1.216	6.7974	1.295	8.8661	3.925	6.4848
83500	84612	269.44	1.216	6.7974	1.424	9.7453	3.925	6.4848
84000	85125	269.44	1.216	6.7974	1.565	1.0712 + 5	3.925	6.4848
84500	85639	269.44	1.216	6.7974	1.720	1.1774	3.925	6.4848
85000	86152	269.44	1.216 - 5	6.7974 - 1	1.890 + 0	1.2942 + 5	3.925 - 6	6.4848 - 1
85500	86666	269.44	1.216	6.7974	2.078	1.4225	3.925	6.4848
86000	87180	269.44	1.216	6.7974	2.284	1.5636	3.925	6.4848
86500	87693	269.44	1.216	6.7974	2.510	1.7187	3.925	6.4848
87000	88207	269.44	1.216	6.7974	2.759	1.8891	3.925	6.4848
87500	88721	269.44	1.216	6.7974	3.033	2.0764	3.925	6.4848
88000	89236	269.44	1.216	6.7974	3.334	2.2824	3.925	6.4848
88500	89750	269.44	1.216	6.7974	3.665	2.5087	3.925	6.4848
89000	90264	270.03	1.221	6.8235	4.061	2.7799	3.942	6.5118
89500	90778	271.18	1.230	6.8741	4.531	3.1019	3.973	6.5644
90000	91293	272.32	1.239 - 5	6.9245 - 1	5.051 + 0	3.4580 + 5	4.005 - 6	6.6170 - 1

TABLE III.—Concluded  
GEOMETRIC ALTITUDE, METRIC UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, m	H, m	C <sub>s</sub> , m sec <sup>-1</sup>	$\mu$ , kg m <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , m <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, k·cal m <sup>-1</sup> sec <sup>-1</sup> (°K) <sup>-1</sup>	$\frac{k}{k_0}$
60000	59439	320.606	1.6287 - 5	9.10227 - 1	5.3241 - 2	3.64484 + 3	5.4349 - 6	8.97886 - 1
60500	59930	319.990	1.6237	9.07425	5.6462	3.86533	5.4159	8.94740
61000	60420	319.374	1.6187	9.04619	5.9890	4.10004	5.3968	8.91592
61500	60911	318.756	1.6137	9.01809	6.3541	4.34994	5.3778	8.88441
62000	61401	317.630	1.6045	8.96688	6.7047	4.58998	5.3431	8.82707
62500	61891	316.387	1.5944	8.91035	7.0684	4.83895	5.3048	8.76388
63000	62382	315.139	1.5843	8.85363	7.4547	5.10345	5.2665	8.70057
63500	62872	313.886	1.5741	8.79671	7.8653	5.38457	5.2281	8.63716
64000	63362	312.628	1.5638	8.73959	8.3020	5.68350	5.1896	8.57363
64500	63852	311.366	1.5536	8.68227	8.7665	6.00151	5.1511	8.50999
65000	64342	310.099	1.5433 - 5	8.62476 - 1	9.2609 - 2	6.33998 + 3	5.1125 - 6	8.44625 - 1
65500	64832	308.826	1.5330	8.56703	9.7874	6.70042	5.0739	8.38239
66000	65322	307.549	1.5226	8.50911	1.0348 - 1	7.08442	5.0352	8.31842
66500	65811	306.266	1.5122	8.45098	1.0946	7.49374	4.9964	8.25435
67000	66301	304.979	1.5018	8.39264	1.1584	7.93027	4.9575	8.19016
67500	66791	303.686	1.4913	8.33409	1.2264	8.39607	4.9186	8.12587
68000	67280	302.387	1.4808	8.27533	1.2991	8.89335	4.8796	8.06147
68500	67770	301.084	1.4702	8.21635	1.3767	9.42453	4.8406	7.99695
69000	68259	299.774	1.4596	8.15716	1.4596	9.99222	4.8015	7.93233
69500	68748	298.460	1.4490	8.09775	1.5483	1.05993 + 4	4.7623	7.86760
70000	69237	297.139	1.4383 - 5	8.03813 - 1	1.6431 - 1	1.12488 + 4	4.7230 - 6	7.80276 - 1
70500	69727	295.813	1.4276	7.97828	1.7447	1.19442	4.6837	7.73782
71000	70216	294.482	1.4169	7.91821	1.8535	1.26890	4.6443	7.67276
71500	70705	293.144	1.4061	7.85792	1.9701	1.34874	4.6049	7.60760
72000	71193	291.800	1.3953	7.79740	2.0952	1.43436	4.5654	7.54234
72500	71682	290.451	1.3844	7.73665	2.2294	1.52625	4.5258	7.47696
73000	72171	289.095	1.3735	7.67567	2.3736	1.62492	4.4862	7.41148
73500	72660	287.733	1.3625	7.61446	2.5284	1.73094	4.4465	7.34590
74000	73148	286.365	1.3515	7.55301	2.6949	1.84493	4.4067	7.28021
74500	73637	284.991	1.3405	7.49133	2.8741	1.96757	4.3669	7.21442
75000	74125	283.61	1.329 - 5	7.4294 - 1	3.067 - 1	2.0996 + 4	4.327 - 6	7.1485 - 1
75500	74614	282.22	1.318	7.3673	3.275	2.2419	4.287	7.0825
76000	75102	280.83	1.307	7.3049	3.499	2.3952	4.247	7.0164
76500	75590	279.43	1.296	7.2422	3.741	2.5607	4.207	6.9502
77000	76078	278.02	1.285	7.1793	4.001	2.7394	4.167	6.8839
77500	76566	276.61	1.273	7.1162	4.283	2.9324	4.127	6.8175
78000	77054	275.18	1.262	7.0528	4.588	3.1412	4.086	6.7510
78500	77542	273.76	1.251	6.9891	4.918	3.3671	4.046	6.6844
79000	78030	272.32	1.239	6.9253	5.276	3.6117	4.006	6.6177
79500	78518	270.88	1.228	6.8611	5.663	3.8769	3.965	6.5509
80000	79006	269.44	1.216 - 5	6.7974 - 1	6.085 - 1	4.1655 + 4	3.925 - 6	6.4848 - 1
80500	79493	269.44	1.216	6.7974	6.672	4.5679	3.925	6.4848
81000	79981	269.44	1.216	6.7974	7.317	5.0090	3.925	6.4848
81500	80468	269.44	1.216	6.7974	8.023	5.4927	3.925	6.4848
82000	80956	269.44	1.216	6.7974	8.798	6.0231	3.925	6.4848
82500	81443	269.44	1.216	6.7974	9.647	6.6045	3.925	6.4848
83000	81930	269.44	1.216	6.7974	1.058 + 0	7.2420	3.925	6.4848
83500	82417	269.44	1.216	6.7974	1.160	7.9409	3.925	6.4848
84000	82904	269.44	1.216	6.7974	1.272	8.7071	3.925	6.4848
84500	83391	269.44	1.216	6.7974	1.395	9.5470	3.925	6.4848
85000	83878	269.44	1.216 - 5	6.7974 - 1	1.529 + 0	1.0468 + 5	3.925 - 6	6.4848 - 1
85500	84365	269.44	1.216	6.7974	1.677	1.1477	3.925	6.4848
86000	84852	269.44	1.216	6.7974	1.838	1.2584	3.925	6.4848
86500	85339	269.44	1.216	6.7974	2.015	1.3797	3.925	6.4848
87000	85825	269.44	1.216	6.7974	2.210	1.5127	3.925	6.4848
87500	86312	269.44	1.216	6.7974	2.423	1.6585	3.925	6.4848
88000	86798	269.44	1.216	6.7974	2.656	1.8184	3.925	6.4848
88500	87285	269.44	1.216	6.7974	2.912	1.9936	3.925	6.4848
89000	87771	269.44	1.216	6.7974	3.193	2.1856	3.925	6.4848
89500	88257	269.44	1.216	6.7974	3.500	2.3961	3.925	6.4848
90000	88743	269.44	1.216 - 5	6.7974 - 1	3.837 + 0	2.6268 + 5	3.925 - 6	6.4848 - 1

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Table IV  
TEMPERATURE, PRESSURE, AND DENSITY  
English Units

NOTE: A one- or two-digit number (preceded by a plus or minus sign) following the initial entry of each block indicates the power of ten by which that entry and each succeeding entry of that block should be multiplied. A change of power occurring within a block is indicated by a similar notation.



TABLE IV  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-16500	-16487	577.512	117.842	47.690	1.78241 + 3	5.26344 + 1	1.75910 + 0	1.2082 - 1	1.5799 + 0
-16400	-16387	577.155	117.485	47.492	1.77663	5.24638	1.75340	1.2050	1.5757
-16300	-16287	576.798	117.128	47.294	1.77087	5.22936	1.74771	1.2019	1.5716
-16200	-16187	576.442	116.772	47.095	1.76512	5.21239	1.74204	1.1987	1.5674
-16100	-16088	576.085	116.415	46.897	1.75939	5.19547	1.73638	1.1955	1.5633
-16000	-15988	575.729	116.059	46.699	1.75367 + 3	5.17859 + 1	1.73074 + 0	1.1924 - 1	1.5592 + 0
-15900	-15888	575.372	115.702	46.501	1.74797	5.16175	1.72511	1.1893	1.5551
-15800	-15788	575.015	115.345	46.303	1.74228	5.14496	1.71950	1.1861	1.5510
-15700	-15688	574.659	114.989	46.105	1.73661	5.12821	1.71390	1.1830	1.5469
-15600	-15588	574.302	114.632	45.907	1.73095	5.11150	1.70832	1.1799	1.5428
-15500	-15488	573.945	114.275	45.709	1.72531	5.09484	1.70275	1.1768	1.5388
-15400	-15389	573.589	113.919	45.510	1.71969	5.07823	1.69720	1.1736	1.5347
-15300	-15289	573.232	113.562	45.312	1.71407	5.06165	1.69166	1.1705	1.5306
-15200	-15189	572.876	113.206	45.114	1.70848	5.04513	1.68613	1.1675	1.5266
-15100	-15089	572.519	112.849	44.916	1.70289	5.02864	1.68062	1.1644	1.5226
-15000	-14989	572.162	112.492	44.718	1.69733 + 3	5.01220 + 1	1.67513 + 0	1.1613 - 1	1.5185 + 0
-14900	-14889	571.806	112.136	44.520	1.69177	4.99580	1.66965	1.1582	1.5145
-14800	-14790	571.449	111.779	44.322	1.68623	4.97945	1.66418	1.1551	1.5105
-14700	-14690	571.093	111.423	44.124	1.68071	4.96314	1.65873	1.1521	1.5065
-14600	-14590	570.736	111.066	43.926	1.67520	4.94687	1.65330	1.1490	1.5025
-14500	-14490	570.379	110.709	43.727	1.66971	4.93065	1.64787	1.1460	1.4985
-14400	-14390	570.023	110.353	43.529	1.66423	4.91447	1.64247	1.1429	1.4945
-14300	-14290	569.666	109.996	43.331	1.65876	4.89833	1.63707	1.1399	1.4905
-14200	-14190	569.309	109.639	43.133	1.65331	4.88223	1.63169	1.1368	1.4866
-14100	-14090	568.953	109.283	42.935	1.64788	4.86618	1.62633	1.1338	1.4826
-14000	-13991	568.596	108.926	42.737	1.64246 + 3	4.85017 + 1	1.62098 + 0	1.1308 - 1	1.4786 + 0
-13900	-13891	568.240	108.570	42.539	1.63705	4.83420	1.61564	1.1278	1.4747
-13800	-13791	567.883	108.213	42.341	1.63166	4.81828	1.61032	1.1248	1.4708
-13700	-13691	567.526	107.856	42.142	1.62628	4.80240	1.60501	1.1218	1.4668
-13600	-13591	567.170	107.500	41.944	1.62091	4.78656	1.59972	1.1188	1.4629
-13500	-13491	566.813	107.143	41.746	1.61556	4.77076	1.59444	1.1158	1.4590
-13400	-13391	566.457	106.787	41.548	1.61023	4.75501	1.58917	1.1128	1.4551
-13300	-13292	566.100	106.430	41.350	1.60491	4.73929	1.58392	1.1098	1.4512
-13200	-13192	565.743	106.073	41.152	1.59960	4.72362	1.57868	1.1068	1.4473
-13100	-13092	565.387	105.717	40.954	1.59431	4.70799	1.57346	1.1039	1.4435
-13000	-12992	565.030	105.360	40.756	1.58903 + 3	4.69241 + 1	1.56825 + 0	1.1009 - 1	1.4396 + 0
-12900	-12892	564.673	105.003	40.557	1.58377	4.67686	1.56306	1.0980	1.4357
-12800	-12792	564.317	104.647	40.359	1.57852	4.66136	1.55788	1.0950	1.4319
-12700	-12692	563.960	104.290	40.161	1.57328	4.64590	1.55271	1.0921	1.4280
-12600	-12592	563.604	103.934	39.963	1.56806	4.63048	1.54755	1.0891	1.4242
-12500	-12493	563.247	103.577	39.765	1.56285	4.61510	1.54241	1.0862	1.4203
-12400	-12393	562.890	103.220	39.567	1.55766	4.59976	1.53729	1.0833	1.4165
-12300	-12293	562.534	102.864	39.369	1.55248	4.58447	1.53218	1.0804	1.4127
-12200	-12193	562.177	102.507	39.171	1.54731	4.56921	1.52708	1.0774	1.4089
-12100	-12093	561.821	102.151	38.973	1.54216	4.55400	1.52199	1.0745	1.4051
-12000	-11993	561.464	101.794	38.774	1.53702 + 3	4.53883 + 1	1.51692 + 0	1.0716 - 1	1.4013 + 0
-11900	-11893	561.107	101.437	38.576	1.53190	4.52369	1.51187	1.0687	1.3975
-11800	-11793	560.751	101.081	38.378	1.52679	4.50860	1.50682	1.0659	1.3937
-11700	-11693	560.394	100.724	38.180	1.52169	4.49355	1.50179	1.0630	1.3900
-11600	-11594	560.037	100.367	37.982	1.51661	4.47855	1.49678	1.0601	1.3862
-11500	-11494	559.681	100.011	37.784	1.51154	4.46358	1.49177	1.0572	1.3825
-11400	-11394	559.324	99.654	37.586	1.50649	4.44865	1.48679	1.0544	1.3787
-11300	-11294	558.968	99.298	37.388	1.50144	4.43376	1.48181	1.0515	1.3750
-11200	-11194	558.611	98.941	37.189	1.49642	4.41891	1.47685	1.0487	1.3713
-11100	-11094	558.254	98.584	36.991	1.49140	4.40411	1.47190	1.0458	1.3675
-11000	-10994	557.898	98.228	36.793	1.48640 + 3	4.38934 + 1	1.46696 + 0	1.0430 - 1	1.3638 + 0
-10900	-10894	557.541	97.871	36.595	1.48141	4.37461	1.46204	1.0401	1.3601
-10800	-10794	557.185	97.515	36.397	1.47644	4.35993	1.45713	1.0373	1.3564
-10700	-10695	556.828	97.158	36.199	1.47148	4.34528	1.45224	1.0345	1.3527
-10600	-10595	556.471	96.801	36.001	1.46653	4.33067	1.44736	1.0317	1.3490
-10500	-10495	556.115	96.445	35.803	1.46160	4.31611	1.44249	1.0289	1.3454
-10400	-10395	555.758	96.088	35.604	1.45668	4.30158	1.43763	1.0261	1.3417
-10300	-10295	555.401	95.731	35.406	1.45178	4.28709	1.43279	1.0233	1.3380
-10200	-10195	555.045	95.375	35.208	1.44688	4.27264	1.42796	1.0205	1.3344
-10100	-10095	554.688	95.018	35.010	1.44200	4.25824	1.42315	1.0177	1.3307
-10000	-9995	554.332	94.662	34.812	1.43714 + 3	4.24387 + 1	1.41835 + 0	1.0149 - 1	1.3271 + 0
-9900	-9895	553.975	94.305	34.614	1.43229	4.22954	1.41356	1.0121	1.3235
-9800	-9795	553.618	93.948	34.416	1.42745	4.21525	1.40878	1.0093	1.3198
-9700	-9695	553.262	93.592	34.218	1.42262	4.20099	1.40402	1.0066	1.3162
-9600	-9594	552.905	93.235	34.020	1.41781	4.18678	1.39927	1.0038	1.3126
-9500	-9496	552.549	92.879	33.821	1.41301	4.17261	1.39453	1.0011	1.3090
-9400	-9396	552.192	92.522	33.623	1.40822	4.15847	1.38981	9.9832 - 2	1.3054
-9300	-9296	551.835	92.165	33.425	1.40345	4.14438	1.38509	9.9558	1.3019
-9200	-9196	551.479	91.809	33.227	1.39869	4.13032	1.38040	9.9285	1.2983
-9100	-9096	551.122	91.452	33.029	1.39394	4.11630	1.37571	9.9012	1.2947

TABLE IV  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-16500	-16513	577.558	117.888	47.716	1.78316 + 3	5.26567 + 1	1.75984 + 0	1.2086 - 1	1.5804 + 0
-16400	-16413	577.201	117.531	47.517	1.77737	5.24858	1.75413	1.2054	1.5763
-16300	-16313	576.844	117.174	47.319	1.77160	5.23153	1.74843	1.2023	1.5721
-16200	-16213	576.487	116.817	47.120	1.76584	5.21453	1.74275	1.1991	1.5680
-16100	-16112	576.130	116.460	46.922	1.76010	5.19757	1.73708	1.1959	1.5638
-16000	-16012	575.772	116.102	46.724	1.75437 + 3	5.18066 + 1	1.73143 + 0	1.1928 - 1	1.5597 + 0
-15900	-15912	575.415	115.745	46.525	1.74866	5.16379	1.72579	1.1896	1.5556
-15800	-15812	575.058	115.388	46.327	1.74296	5.14697	1.72017	1.1865	1.5515
-15700	-15712	574.701	115.031	46.128	1.73728	5.13019	1.71456	1.1834	1.5474
-15600	-15612	574.344	114.674	45.930	1.73161	5.11345	1.70897	1.1802	1.5433
-15500	-15512	573.987	114.317	45.731	1.72596	5.09676	1.70339	1.1771	1.5392
-15400	-15411	573.629	113.959	45.533	1.72032	5.08012	1.69783	1.1740	1.5352
-15300	-15311	573.272	113.602	45.335	1.71470	5.06351	1.69228	1.1709	1.5311
-15200	-15211	572.915	113.245	45.136	1.70910	5.04696	1.68675	1.1678	1.5270
-15100	-15111	572.558	112.888	44.938	1.70350	5.03044	1.68123	1.1647	1.5230
-15000	-15011	572.201	112.531	44.739	1.69793 + 3	5.01397 + 1	1.67572 + 0	1.1616 - 1	1.5190 + 0
-14900	-14911	571.844	112.174	44.541	1.69236	4.99755	1.67023	1.1585	1.5149
-14800	-14811	571.487	111.817	44.343	1.68682	4.98117	1.66476	1.1555	1.5109
-14700	-14710	571.130	111.460	44.144	1.68128	4.96483	1.65930	1.1524	1.5069
-14600	-14610	570.772	111.102	43.946	1.67577	4.94853	1.65385	1.1493	1.5029
-14500	-14510	570.415	110.745	43.747	1.67026	4.93228	1.64842	1.1463	1.4989
-14400	-14410	570.058	110.388	43.549	1.66477	4.91607	1.64300	1.1432	1.4949
-14300	-14310	569.701	110.031	43.351	1.65930	4.89991	1.63760	1.1402	1.4909
-14200	-14210	569.344	109.674	43.152	1.65384	4.88379	1.63221	1.1371	1.4869
-14100	-14110	568.987	109.317	42.954	1.64840	4.86771	1.62684	1.1341	1.4830
-14000	-14009	568.630	108.960	42.755	1.64297 + 3	4.85167 + 1	1.62148 + 0	1.1311 - 1	1.4790 + 0
-13900	-13909	568.273	108.603	42.557	1.63755	4.83568	1.61614	1.1280	1.4751
-13800	-13809	567.916	108.246	42.359	1.63215	4.81973	1.61081	1.1250	1.4711
-13700	-13709	567.558	107.889	42.160	1.62676	4.80383	1.60549	1.1220	1.4672
-13600	-13609	567.201	107.531	41.962	1.62139	4.78796	1.60019	1.1190	1.4633
-13500	-13509	566.844	107.174	41.764	1.61603	4.77214	1.59490	1.1160	1.4594
-13400	-13409	566.487	106.817	41.565	1.61069	4.75636	1.58963	1.1130	1.4554
-13300	-13308	566.130	106.460	41.367	1.60536	4.74063	1.58437	1.1101	1.4515
-13200	-13208	565.773	106.103	41.168	1.60005	4.72493	1.57912	1.1071	1.4477
-13100	-13108	565.416	105.746	40.970	1.59475	4.70928	1.57389	1.1041	1.4438
-13000	-13008	565.059	105.389	40.772	1.58946 + 3	4.69367 + 1	1.56867 + 0	1.1011 - 1	1.4399 + 0
-12900	-12908	564.702	105.032	40.573	1.58419	4.67810	1.56347	1.0982	1.4360
-12800	-12808	564.345	104.675	40.375	1.57893	4.66258	1.55828	1.0952	1.4322
-12700	-12708	563.988	104.318	40.177	1.57369	4.64709	1.55311	1.0923	1.4283
-12600	-12608	563.631	103.961	39.978	1.56846	4.63165	1.54795	1.0894	1.4245
-12500	-12507	563.274	103.604	39.780	1.56324	4.61625	1.54280	1.0864	1.4206
-12400	-12407	562.917	103.247	39.581	1.55804	4.60089	1.53767	1.0835	1.4168
-12300	-12307	562.560	102.890	39.383	1.55285	4.58558	1.53255	1.0806	1.4130
-12200	-12207	562.203	102.533	39.185	1.54768	4.57030	1.52744	1.0777	1.4092
-12100	-12107	561.846	102.176	38.986	1.54252	4.55507	1.52235	1.0747	1.4054
-12000	-12007	561.489	101.819	38.788	1.53738 + 3	4.53987 + 1	1.51727 + 0	1.0718 - 1	1.4016 + 0
-11900	-11907	561.132	101.462	38.590	1.53225	4.52472	1.51221	1.0689	1.3978
-11800	-11807	560.774	101.104	38.391	1.52713	4.50961	1.50716	1.0660	1.3940
-11700	-11707	560.417	100.747	38.193	1.52203	4.49454	1.50212	1.0632	1.3902
-11600	-11606	560.060	100.390	37.995	1.51694	4.47951	1.49710	1.0603	1.3865
-11500	-11506	559.703	100.033	37.796	1.51186	4.46453	1.49209	1.0574	1.3827
-11400	-11406	559.346	99.676	37.598	1.50680	4.44958	1.48710	1.0545	1.3790
-11300	-11306	558.989	99.319	37.400	1.50175	4.43467	1.48211	1.0517	1.3752
-11200	-11206	558.632	98.962	37.201	1.49672	4.41981	1.47715	1.0488	1.3715
-11100	-11106	558.275	98.605	37.003	1.49170	4.40498	1.47219	1.0460	1.3678
-11000	-11006	557.918	98.248	36.805	1.48669 + 3	4.39020 + 1	1.46725 + 0	1.0431 - 1	1.3640 + 0
-10900	-10906	557.561	97.891	36.606	1.48170	4.37545	1.46232	1.0403	1.3603
-10800	-10806	557.204	97.534	36.408	1.47672	4.36075	1.45741	1.0375	1.3566
-10700	-10705	556.847	97.177	36.210	1.47175	4.34608	1.45251	1.0346	1.3529
-10600	-10605	556.491	96.821	36.011	1.46680	4.33146	1.44762	1.0318	1.3492
-10500	-10505	556.134	96.464	35.813	1.46186	4.31688	1.44275	1.0290	1.3456
-10400	-10405	555.777	96.107	35.615	1.45694	4.30233	1.43789	1.0262	1.3419
-10300	-10305	555.420	95.750	35.416	1.45203	4.28783	1.43304	1.0234	1.3382
-10200	-10205	555.063	95.393	35.218	1.44713	4.27337	1.42820	1.0206	1.3346
-10100	-10105	554.706	95.036	35.020	1.44224	4.25894	1.42338	1.0178	1.3309
-10000	-10005	554.349	94.679	34.821	1.43737 + 3	4.24456 + 1	1.41858 + 0	1.0150 - 1	1.3273 + 0
-9900	-9905	553.992	94.322	34.623	1.43251	4.23021	1.41378	1.0122	1.3236
-9800	-9805	553.635	93.965	34.425	1.42767	4.21590	1.40900	1.0095	1.3200
-9700	-9705	553.278	93.608	34.227	1.42284	4.20164	1.40423	1.0067	1.3164
-9600	-9604	552.921	93.251	34.028	1.41802	4.18741	1.39948	1.0039	1.3128
-9500	-9504	552.564	92.894	33.830	1.41321	4.17322	1.39473	1.0012	1.3092
-9400	-9404	552.207	92.537	33.632	1.40842	4.15907	1.39001	9.9844 - 2	1.3056
-9300	-9304	551.850	92.180	33.433	1.40365	4.14496	1.38529	9.9569	1.3020
-9200	-9204	551.493	91.823	33.235	1.39888	4.13089	1.38059	9.9296	1.2984
-9100	-9104	551.136	91.466	33.037	1.39413	4.11686	1.37590	9.9022	1.2948

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-9000	-8996	550.765	91.095	32.831	1.38921 + 3	4.10232 + 1	1.37104 + 0	9.8739 - 2	1.2911 + 0
-8900	-8896	550.409	90.739	32.633	1.38448	4.08838	1.36638	9.8467	1.2876
-8800	-8796	550.052	90.382	32.435	1.37978	4.07448	1.36173	9.8196	1.2840
-8700	-8696	549.696	90.026	32.236	1.37508	4.06061	1.35710	9.7926	1.2805
-8600	-8596	549.339	89.669	32.038	1.37040	4.04679	1.35248	9.7655	1.2770
-8500	-8497	548.982	89.312	31.840	1.36573	4.03300	1.34787	9.7386	1.2734
-8400	-8397	548.626	88.956	31.642	1.36107	4.01925	1.34327	9.7117	1.2699
-8300	-8297	548.269	88.599	31.444	1.35643	4.00553	1.33869	9.6849	1.2664
-8200	-8197	547.912	88.243	31.246	1.35180	3.99186	1.33412	9.6581	1.2629
-8100	-8097	547.556	87.886	31.048	1.34718	3.97822	1.32956	9.6314	1.2594
-8000	-7997	547.199	87.529	30.850	1.34258 + 3	3.96462 + 1	1.32502 + 0	9.6047 - 2	1.2559 + 0
-7900	-7897	546.843	87.173	30.651	1.33798	3.95106	1.32049	9.5781	1.2525
-7800	-7797	546.486	86.816	30.453	1.33340	3.93754	1.31597	9.5515	1.2490
-7700	-7697	546.129	86.459	30.255	1.32884	3.92405	1.31146	9.5250	1.2455
-7600	-7597	545.773	86.103	30.057	1.32428	3.91060	1.30697	9.4986	1.2421
-7500	-7497	545.416	85.746	29.859	1.31974	3.89719	1.30248	9.4722	1.2386
-7400	-7397	545.060	85.390	29.661	1.31521	3.88382	1.29801	9.4459	1.2352
-7300	-7297	544.703	85.033	29.463	1.31070	3.87048	1.29356	9.4196	1.2317
-7200	-7198	544.346	84.676	29.265	1.30619	3.85718	1.28911	9.3934	1.2283
-7100	-7098	543.990	84.320	29.067	1.30170	3.84392	1.28468	9.3672	1.2249
-7000	-6998	543.633	83.963	28.868	1.29722 + 3	3.83069 + 1	1.28026 + 0	9.3411 - 2	1.2215 + 0
-6900	-6898	543.276	83.606	28.670	1.29276	3.81750	1.27585	9.3151	1.2181
-6800	-6798	542.920	83.250	28.472	1.28830	3.80435	1.27145	9.2891	1.2147
-6700	-6698	542.563	82.893	28.274	1.28386	3.79124	1.26707	9.2631	1.2113
-6600	-6598	542.207	82.537	28.076	1.27943	3.77816	1.26270	9.2372	1.2079
-6500	-6498	541.850	82.180	27.878	1.27501	3.76512	1.25834	9.2114	1.2045
-6400	-6398	541.493	81.823	27.680	1.27061	3.75211	1.25399	9.1856	1.2011
-6300	-6298	541.137	81.467	27.482	1.26622	3.73914	1.24966	9.1599	1.1978
-6200	-6198	540.780	81.110	27.283	1.26184	3.72621	1.24534	9.1342	1.1944
-6100	-6098	540.424	80.754	27.085	1.25747	3.71331	1.24103	9.1086	1.1911
-6000	-5998	540.067	80.397	26.887	1.25312 + 3	3.70045 + 1	1.23673 + 0	9.0831 - 2	1.1877 + 0
-5900	-5898	539.710	80.040	26.689	1.24877	3.68763	1.23244	9.0576	1.1844
-5800	-5798	539.354	79.684	26.491	1.24444	3.67484	1.22817	9.0321	1.1811
-5700	-5698	538.997	79.327	26.293	1.24012	3.66208	1.22391	9.0068	1.1778
-5600	-5598	538.640	78.970	26.095	1.23582	3.64937	1.21966	8.9814	1.1744
-5500	-5499	538.284	78.614	25.897	1.23152	3.63669	1.21542	8.9561	1.1711
-5400	-5399	537.927	78.257	25.698	1.22724	3.62404	1.21119	8.9309	1.1678
-5300	-5299	537.571	77.901	25.500	1.22297	3.61143	1.20698	8.9057	1.1645
-5200	-5199	537.214	77.544	25.302	1.21871	3.59886	1.20278	8.8806	1.1613
-5100	-5099	536.857	77.187	25.104	1.21447	3.58632	1.19859	8.8556	1.1580
-5000	-4999	536.501	76.831	24.906	1.21023 + 3	3.57382 + 1	1.19441 + 0	8.8306 - 2	1.1547 + 0
-4900	-4899	536.144	76.474	24.708	1.20601	3.56135	1.19024	8.8056	1.1514
-4800	-4799	535.788	76.118	24.510	1.20180	3.54891	1.18608	8.7807	1.1482
-4700	-4699	535.431	75.761	24.312	1.19760	3.53652	1.18194	8.7559	1.1449
-4600	-4599	535.074	75.404	24.114	1.19342	3.52416	1.17781	8.7311	1.1417
-4500	-4499	534.718	75.048	23.915	1.18924	3.51183	1.17369	8.7063	1.1385
-4400	-4399	534.361	74.691	23.717	1.18508	3.49953	1.16958	8.6816	1.1352
-4300	-4299	534.004	74.334	23.519	1.18093	3.48728	1.16548	8.6570	1.1320
-4200	-4199	533.648	73.978	23.321	1.17679	3.47505	1.16140	8.6324	1.1288
-4100	-4099	533.291	73.621	23.123	1.17266	3.46287	1.15733	8.6079	1.1256
-4000	-3999	532.935	73.265	22.925	1.16855 + 3	3.45071 + 1	1.15326 + 0	8.5834 - 2	1.1224 + 0
-3900	-3899	532.578	72.908	22.727	1.16444	3.43859	1.14921	8.5590	1.1192
-3800	-3799	532.221	72.551	22.529	1.16035	3.42651	1.14518	8.5347	1.1160
-3700	-3699	531.865	72.195	22.330	1.15627	3.41446	1.14115	8.5103	1.1128
-3600	-3599	531.508	71.838	22.132	1.15220	3.40244	1.13713	8.4861	1.1097
-3500	-3499	531.152	71.482	21.934	1.14814	3.39046	1.13313	8.4619	1.1065
-3400	-3399	530.795	71.125	21.736	1.14410	3.37852	1.12914	8.4377	1.1033
-3300	-3299	530.438	70.768	21.538	1.14006	3.36660	1.12515	8.4136	1.1002
-3200	-3200	530.082	70.412	21.340	1.13604	3.35472	1.12118	8.3896	1.0970
-3100	-3100	529.725	70.055	21.142	1.13203	3.34288	1.11723	8.3656	1.0939
-3000	-3000	529.368	69.698	20.944	1.12803 + 3	3.33107 + 1	1.11328 + 0	8.3416 - 2	1.0908 + 0
-2900	-2900	529.012	69.342	20.745	1.12404	3.31929	1.10934	8.3178	1.0877
-2800	-2800	528.655	68.985	20.547	1.12006	3.30755	1.10542	8.2939	1.0845
-2700	-2700	528.299	68.629	20.349	1.11610	3.29584	1.10150	8.2701	1.0814
-2600	-2600	527.942	68.272	20.151	1.11214	3.28416	1.09760	8.2464	1.0783
-2500	-2500	527.585	67.915	19.953	1.10820	3.27252	1.09371	8.2227	1.0752
-2400	-2400	527.229	67.559	19.755	1.10427	3.26091	1.08983	8.1991	1.0721
-2300	-2300	526.872	67.202	19.557	1.10035	3.24933	1.08596	8.1755	1.0691
-2200	-2200	526.516	66.846	19.359	1.09644	3.23779	1.08210	8.1520	1.0660
-2100	-2100	526.159	66.489	19.161	1.09254	3.22628	1.07826	8.1285	1.0629
-2000	-2000	525.802	66.132	18.962	1.08866 + 3	3.21480 + 1	1.07442 + 0	8.1051 - 2	1.0598 + 0
-1900	-1900	525.446	65.776	18.764	1.08478	3.20336	1.07060	8.0817	1.0568
-1800	-1800	525.089	65.419	18.566	1.08092	3.19195	1.06678	8.0584	1.0537
-1700	-1700	524.732	65.062	18.368	1.07707	3.18057	1.06298	8.0351	1.0507
-1600	-1600	524.376	64.706	18.170	1.07322	3.16923	1.05919	8.0119	1.0477
-1500	-1500	524.019	64.349	17.972	1.06939	3.15792	1.05541	7.9888	1.0446
-1400	-1400	523.663	63.993	17.774	1.06557	3.14664	1.05164	7.9657	1.0416
-1300	-1300	523.306	63.636	17.576	1.06176	3.13539	1.04788	7.9426	1.0386
-1200	-1200	522.949	63.279	17.377	1.05797	3.12418	1.04413	7.9196	1.0356
-1100	-1100	522.593	62.923	17.179	1.05418	3.11300	1.04040	7.8966	1.0326

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-9000	-9004	550.779	91.109	32.838	1.38939 + 3	4.10286 + 1	1.37122 + 0	9.8750 - 2	1.2913 + 0
-8900	-8904	550.422	90.752	32.640	1.38466	4.08891	1.36656	9.8478	1.2877
-8800	-8804	550.065	90.395	32.442	1.37995	4.07499	1.36191	9.8206	1.2842
-8700	-8704	549.709	90.039	32.244	1.37525	4.06112	1.35727	9.7935	1.2806
-8600	-8604	549.352	89.682	32.045	1.37056	4.04728	1.35264	9.7665	1.2771
-8500	-8503	548.995	89.325	31.847	1.36589	4.03347	1.34803	9.7395	1.2736
-8400	-8403	548.638	88.968	31.649	1.36123	4.01971	1.34343	9.7126	1.2700
-8300	-8303	548.281	88.611	31.451	1.35658	4.00599	1.33884	9.6857	1.2665
-8200	-8203	547.924	88.254	31.252	1.35195	3.99230	1.33427	9.6589	1.2630
-8100	-8103	547.567	87.897	31.054	1.34733	3.97865	1.32971	9.6322	1.2595
-8000	-8003	547.210	87.540	30.856	1.34272 + 3	3.96504 + 1	1.32516 + 0	9.6055 - 2	1.2560 + 0
-7900	-7903	546.853	87.183	30.657	1.33812	3.95147	1.32062	9.5789	1.2526
-7800	-7803	546.496	86.826	30.459	1.33354	3.93793	1.31610	9.5523	1.2491
-7700	-7703	546.140	86.470	30.261	1.32897	3.92444	1.31159	9.5258	1.2456
-7600	-7603	545.783	86.113	30.063	1.32441	3.91098	1.30709	9.4993	1.2422
-7500	-7503	545.426	85.756	29.864	1.31986	3.89755	1.30260	9.4729	1.2387
-7400	-7403	545.069	85.399	29.666	1.31533	3.88417	1.29813	9.4466	1.2353
-7300	-7303	544.712	85.042	29.468	1.31081	3.87082	1.29367	9.4203	1.2318
-7200	-7202	544.355	84.685	29.270	1.30630	3.85751	1.28922	9.3940	1.2284
-7100	-7102	543.998	84.328	29.071	1.30181	3.84424	1.28479	9.3678	1.2250
-7000	-7002	543.641	83.971	28.873	1.29733 + 3	3.83100 + 1	1.28036 + 0	9.3417 - 2	1.2216 + 0
-6900	-6902	543.285	83.615	28.675	1.29286	3.81781	1.27595	9.3156	1.2181
-6800	-6802	542.928	83.258	28.477	1.28840	3.80464	1.27155	9.2896	1.2147
-6700	-6702	542.571	82.901	28.278	1.28396	3.79152	1.26717	9.2637	1.2113
-6600	-6602	542.214	82.544	28.080	1.27952	3.77843	1.26279	9.2378	1.2080
-6500	-6502	541.857	82.187	27.882	1.27510	3.76538	1.25843	9.2119	1.2046
-6400	-6402	541.500	81.830	27.684	1.27070	3.75237	1.25408	9.1861	1.2012
-6300	-6302	541.144	81.474	27.485	1.26630	3.73939	1.24974	9.1604	1.1978
-6200	-6202	540.787	81.117	27.287	1.26192	3.72645	1.24542	9.1347	1.1945
-6100	-6102	540.430	80.760	27.089	1.25755	3.71354	1.24110	9.1091	1.1911
-6000	-6002	540.073	80.403	26.891	1.25319 + 3	3.70067 + 1	1.23680 + 0	9.0835 - 2	1.1878 + 0
-5900	-5902	539.716	80.046	26.692	1.24885	3.68784	1.23251	9.0580	1.1845
-5800	-5802	539.359	79.689	26.494	1.24451	3.67504	1.22824	9.0326	1.1811
-5700	-5702	539.003	79.333	26.296	1.24019	3.66228	1.22397	9.0072	1.1778
-5600	-5602	538.646	78.976	26.098	1.23588	3.64956	1.21972	8.9818	1.1745
-5500	-5501	538.289	78.619	25.899	1.23159	3.63687	1.21548	8.9565	1.1712
-5400	-5401	537.932	78.262	25.701	1.22730	3.62422	1.21125	8.9313	1.1679
-5300	-5301	537.575	77.905	25.503	1.22303	3.61160	1.20704	8.9061	1.1646
-5200	-5201	537.219	77.549	25.305	1.21877	3.59902	1.20283	8.8810	1.1613
-5100	-5101	536.862	77.192	25.107	1.21452	3.58647	1.19864	8.8559	1.1580
-5000	-5001	536.505	76.835	24.908	1.21028 + 3	3.57397 + 1	1.19446 + 0	8.8309 - 2	1.1547 + 0
-4900	-4901	536.148	76.478	24.710	1.20606	3.56149	1.19029	8.8059	1.1515
-4800	-4801	535.791	76.121	24.512	1.20185	3.54905	1.18613	8.7810	1.1482
-4700	-4701	535.435	75.765	24.314	1.19765	3.53665	1.18199	8.7561	1.1450
-4600	-4601	535.078	75.408	24.116	1.19346	3.52428	1.17785	8.7313	1.1417
-4500	-4501	534.721	75.051	23.917	1.18928	3.51195	1.17373	8.7066	1.1385
-4400	-4401	534.364	74.694	23.719	1.18512	3.49965	1.16962	8.6819	1.1353
-4300	-4301	534.008	74.338	23.521	1.18096	3.48739	1.16552	8.6572	1.1320
-4200	-4201	533.651	73.981	23.323	1.17682	3.47516	1.16143	8.6326	1.1288
-4100	-4101	533.294	73.624	23.125	1.17269	3.46296	1.15736	8.6081	1.1256
-4000	-4001	532.937	73.267	22.926	1.16858 + 3	3.45081 + 1	1.15330 + 0	8.5836 - 2	1.1224 + 0
-3900	-3901	532.581	72.911	22.728	1.16447	3.43868	1.14924	8.5592	1.1192
-3800	-3801	532.224	72.554	22.530	1.16038	3.42659	1.14520	8.5348	1.1160
-3700	-3701	531.867	72.197	22.332	1.15630	3.41454	1.14117	8.5105	1.1129
-3600	-3601	531.510	71.840	22.134	1.15223	3.40252	1.13716	8.4862	1.1097
-3500	-3501	531.154	71.484	21.935	1.14817	3.39053	1.13315	8.4620	1.1065
-3400	-3401	530.797	71.127	21.737	1.14412	3.37858	1.12916	8.4379	1.1034
-3300	-3301	530.440	70.770	21.539	1.14008	3.36666	1.12517	8.4138	1.1002
-3200	-3200	530.083	70.413	21.341	1.13606	3.35478	1.12120	8.3897	1.0971
-3100	-3100	529.727	70.057	21.143	1.13205	3.34293	1.11724	8.3657	1.0939
-3000	-3000	529.370	69.700	20.944	1.12805 + 3	3.33112 + 1	1.11329 + 0	8.3418 - 2	1.0908 + 0
-2900	-2900	529.013	69.343	20.746	1.12406	3.31934	1.10936	8.3179	1.0877
-2800	-2800	528.657	68.987	20.548	1.12008	3.30759	1.10543	8.2940	1.0845
-2700	-2700	528.300	68.630	20.350	1.11611	3.29588	1.10152	8.2702	1.0814
-2600	-2600	527.943	68.273	20.152	1.11216	3.28420	1.09761	8.2465	1.0783
-2500	-2500	527.586	67.916	19.954	1.10821	3.27255	1.09372	8.2228	1.0752
-2400	-2400	527.230	67.560	19.755	1.10428	3.26094	1.08984	8.1992	1.0721
-2300	-2300	526.873	67.203	19.557	1.10036	3.24936	1.08597	8.1756	1.0691
-2200	-2200	526.516	66.846	19.359	1.09645	3.23782	1.08211	8.1521	1.0660
-2100	-2100	526.160	66.490	19.161	1.09255	3.22630	1.07826	8.1286	1.0629
-2000	-2000	525.803	66.133	18.963	1.08866 + 3	3.21482 + 1	1.07443 + 0	8.1051 - 2	1.0599 + 0
-1900	-1900	525.446	65.776	18.765	1.08479	3.20338	1.07060	8.0818	1.0568
-1800	-1800	525.090	65.420	18.566	1.08092	3.19197	1.06679	8.0585	1.0537
-1700	-1700	524.733	65.063	18.368	1.07707	3.18059	1.06299	8.0352	1.0507
-1600	-1600	524.376	64.706	18.170	1.07323	3.16924	1.05919	8.0120	1.0477
-1500	-1500	524.020	64.350	17.972	1.06940	3.15793	1.05541	7.9888	1.0446
-1400	-1400	523.663	63.993	17.774	1.06558	3.14665	1.05164	7.9657	1.0416
-1300	-1300	523.306	63.636	17.576	1.06177	3.13540	1.04788	7.9426	1.0386
-1200	-1200	522.950	63.280	17.378	1.05797	3.12418	1.04414	7.9196	1.0356
-1100	-1100	522.593	62.923	17.179	1.05418	3.11300	1.04040	7.8966	1.0326



TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-1000	-1000	522.236	62.566	16.981	1.05041 + 3	3.10185 + 1	1.03667 + 0	7.8737 - 2	1.0296 + 0
-900	-900	521.880	62.210	16.783	1.04664	3.09073	1.03295	7.8509	1.0266
-800	-800	521.523	61.853	16.585	1.04289	3.07965	1.02925	7.8281	1.0236
-700	-700	521.166	61.496	16.387	1.03914	3.06859	1.02556	7.8053	1.0206
-600	-600	520.810	61.140	16.189	1.03541	3.05757	1.02187	7.7826	1.0177
-500	-500	520.453	60.783	15.991	1.03169	3.04659	1.01820	7.7599	1.0147
-400	-400	520.096	60.426	15.792	1.02798	3.03563	1.01454	7.7373	1.0118
-300	-300	519.740	60.070	15.594	1.02428	3.02471	1.01089	7.7148	1.0088
-200	-200	519.383	59.713	15.396	1.02059	3.01381	1.00725	7.6923	1.0059
-100	-100	519.027	59.357	15.198	1.01692	3.00295	1.00362	7.6698	1.0029
0	0	518.670	59.000	15.000	1.01325 + 3	2.99213 + 1	1.00000 + 0	7.6474 - 2	1.0000 + 0
100	100	518.313	58.643	14.802	1.00959	2.98133	9.96391 - 1	7.6251	9.9708 - 1
200	200	517.957	58.287	14.604	1.00595	2.97056	9.92793	7.6028	9.9416
300	300	517.600	57.930	14.406	1.00231	2.95983	9.89206	7.5805	9.9125
400	400	517.244	57.574	14.208	9.98689 + 2	2.94913	9.85629	7.5583	9.8835
500	500	516.887	57.217	14.009	9.95075	2.93846	9.82063	7.5362	9.8545
600	600	516.530	56.860	13.811	9.91472	2.92782	9.78507	7.5141	9.8256
700	700	516.174	56.504	13.613	9.87880	2.91721	9.74961	7.4920	9.7968
800	800	515.817	56.147	13.415	9.84298	2.90663	9.71426	7.4700	9.7680
900	900	515.460	55.790	13.217	9.80726	2.89608	9.67901	7.4480	9.7393
1000	1000	515.104	55.434	13.019	9.77165 + 2	2.88557 + 1	9.64387 - 1	7.4261 - 2	9.7106 - 1
1100	1100	514.747	55.077	12.821	9.73615	2.87508	9.60883	7.4043	9.6821
1200	1200	514.391	54.721	12.623	9.70075	2.86463	9.57390	7.3825	9.6535
1300	1300	514.034	54.364	12.424	9.66545	2.85421	9.53906	7.3607	9.6251
1400	1400	513.677	54.007	12.226	9.63026	2.84382	9.50433	7.3390	9.5967
1500	1500	513.321	53.651	12.028	9.59517	2.83345	9.46970	7.3174	9.5684
1600	1600	512.964	53.294	11.830	9.56019	2.82312	9.43518	7.2957	9.5401
1700	1700	512.608	52.938	11.632	9.52531	2.81282	9.40075	7.2742	9.5119
1800	1800	512.251	52.581	11.434	9.49053	2.80255	9.36643	7.2527	9.4838
1900	1900	511.894	52.224	11.236	9.45586	2.79231	9.33221	7.2312	9.4557
2000	2000	511.538	51.868	11.038	9.42129 + 2	2.78210 + 1	9.29809 - 1	7.2098 - 2	9.4277 - 1
2100	2100	511.181	51.511	10.839	9.38682	2.77193	9.26407	7.1884	9.3998
2200	2200	510.824	51.154	10.641	9.35245	2.76178	9.23015	7.1671	9.3719
2300	2300	510.468	50.798	10.443	9.31818	2.75166	9.19633	7.1458	9.3441
2400	2400	510.111	50.441	10.245	9.28402	2.74157	9.16262	7.1246	9.3164
2500	2500	509.755	50.085	10.047	9.24996	2.73151	9.12900	7.1034	9.2887
2600	2600	509.398	49.728	9.849	9.21600	2.72148	9.09548	7.0823	9.2610
2700	2700	509.041	49.371	9.651	9.18214	2.71148	9.06207	7.0612	9.2335
2800	2800	508.685	49.015	9.453	9.14838	2.70152	9.02875	7.0402	9.2060
2900	2900	508.328	48.658	9.255	9.11472	2.69158	8.99553	7.0192	9.1785
3000	3000	507.972	48.302	9.056	9.08116 + 2	2.68167 + 1	8.96241 - 1	6.9983 - 2	9.1512 - 1
3100	3100	507.615	47.945	8.858	9.04770	2.67179	8.92939	6.9774	9.1239
3200	3200	507.258	47.588	8.660	9.01435	2.66194	8.89647	6.9566	9.0966
3300	3300	506.902	47.232	8.462	8.98109	2.65211	8.86364	6.9358	9.0694
3400	3400	506.545	46.875	8.264	8.94793	2.64232	8.83092	6.9150	9.0423
3500	3500	506.188	46.518	8.066	8.91487	2.63256	8.79829	6.8943	9.0152
3600	3600	505.832	46.162	7.868	8.88191	2.62283	8.76576	6.8737	8.9882
3700	3700	505.475	45.805	7.670	8.84905	2.61312	8.73333	6.8531	8.9613
3800	3800	505.119	45.449	7.471	8.81628	2.60345	8.70100	6.8325	8.9344
3900	3900	504.762	45.092	7.273	8.78362	2.59380	8.66876	6.8120	8.9076
4000	4000	504.405	44.735	7.075	8.75105 + 2	2.58418 + 1	8.63661 - 1	6.7916 - 2	8.8809 - 1
4100	4100	504.049	44.379	6.877	8.71858	2.57460	8.60457	6.7712	8.8542
4200	4200	503.692	44.022	6.679	8.68621	2.56504	8.57262	6.7508	8.8275
4300	4300	503.335	43.666	6.481	8.65393	2.55551	8.54077	6.7305	8.8010
4400	4400	502.979	43.309	6.283	8.62176	2.54600	8.50901	6.7102	8.7745
4500	4500	502.622	42.952	6.085	8.58968	2.53653	8.47735	6.6900	8.7480
4600	4600	502.266	42.596	5.886	8.55769	2.52709	8.44579	6.6698	8.7216
4700	4700	501.909	42.239	5.688	8.52581	2.51767	8.41432	6.6497	8.6953
4800	4800	501.552	41.882	5.490	8.49402	2.50828	8.38294	6.6296	8.6690
4900	4900	501.196	41.526	5.292	8.46232	2.49892	8.35166	6.6096	8.6428
5000	5000	500.839	41.169	5.094	8.43072 + 2	2.48959 + 1	8.32048 - 1	6.5896 - 2	8.6167 - 1
5100	5100	500.483	40.813	4.896	8.39922	2.48029	8.28939	6.5696	8.5906
5200	5200	500.126	40.456	4.698	8.36781	2.47101	8.25839	6.5497	8.5646
5300	5300	499.769	40.099	4.500	8.33650	2.46177	8.22748	6.5299	8.5386
5400	5400	499.413	39.743	4.302	8.30528	2.45255	8.19667	6.5101	8.5127
5500	5500	499.056	39.386	4.103	8.27416	2.44336	8.16596	6.4903	8.4869
5600	5600	498.699	39.029	3.905	8.24313	2.43420	8.13534	6.4706	8.4611
5700	5700	498.343	38.673	3.707	8.21220	2.42506	8.10481	6.4509	8.4354
5800	5800	497.986	38.316	3.509	8.18136	2.41595	8.07437	6.4313	8.4097
5900	5900	497.630	37.960	3.311	8.15061	2.40687	8.04403	6.4117	8.3841
6000	6000	497.273	37.603	3.113	8.11996 + 2	2.39782 + 1	8.01377 - 1	6.3922 - 2	8.3586 - 1
6100	6100	496.916	37.246	2.915	8.08940	2.38880	7.98361	6.3727	8.3331
6200	6200	496.560	36.890	2.717	8.05893	2.37980	7.95355	6.3532	8.3077
6300	6300	496.203	36.533	2.518	8.02856	2.37083	7.92357	6.3339	8.2823
6400	6400	495.847	36.177	2.320	7.99828	2.36189	7.89369	6.3145	8.2570
6500	6500	495.490	35.820	2.122	7.96809	2.35298	7.86389	6.2952	8.2318
6600	6600	495.133	35.463	1.924	7.93799	2.34409	7.83419	6.2759	8.2066
6700	6700	494.777	35.107	1.726	7.90799	2.33523	7.80458	6.2567	8.1815
6800	6800	494.420	34.750	1.528	7.87808	2.32640	7.77506	6.2376	8.1564
6900	6900	494.063	34.393	1.330	7.84826	2.31759	7.74563	6.2184	8.1314

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
-1000	-1000	522.236	62.566	16.981	1.05041 + 3	3.10185 + 1	1.03667 + 0	7.8737 - 2	1.0296 + 0
-900	-900	521.880	62.210	16.783	1.04664	3.09073	1.03296	7.8509	1.0266
-800	-800	521.523	61.853	16.585	1.04289	3.07965	1.02925	7.8281	1.0236
-700	-700	521.166	61.496	16.387	1.03915	3.06860	1.02556	7.8053	1.0206
-600	-600	520.810	61.140	16.189	1.03541	3.05758	1.02187	7.7826	1.0177
-500	-500	520.453	60.783	15.991	1.03169	3.04659	1.01820	7.7599	1.0147
-400	-400	520.096	60.426	15.792	1.02798	3.03563	1.01454	7.7373	1.0118
-300	-300	519.740	60.070	15.594	1.02428	3.02471	1.01089	7.7148	1.0088
-200	-200	519.383	59.713	15.396	1.02059	3.01381	1.00725	7.6923	1.0059
-100	-100	519.027	59.357	15.198	1.01692	3.00295	1.00362	7.6698	1.0029
0	0	518.670	59.000	15.000	1.01325 + 3	2.99213 + 1	1.00000 + 0	7.6474 - 2	1.0000 + 0
100	100	518.313	58.643	14.802	1.00959	2.98133	9.96391 - 1	7.6251	9.9708 - 1
200	200	517.957	58.287	14.604	1.00595	2.97056	9.92793	7.6028	9.9416
300	300	517.600	57.930	14.406	1.00231	2.95983	9.89206	7.5805	9.9125
400	400	517.244	57.574	14.208	9.98689 + 2	2.94913	9.85629	7.5583	9.8835
500	500	516.887	57.217	14.009	9.95075	2.93846	9.82063	7.5362	9.8545
600	600	516.530	56.860	13.811	9.91473	2.92782	9.78507	7.5141	9.8256
700	700	516.174	56.504	13.613	9.87880	2.91721	9.74962	7.4920	9.7968
800	800	515.817	56.147	13.415	9.84299	2.90663	9.71427	7.4700	9.7680
900	900	515.461	55.791	13.217	9.80728	2.89609	9.67903	7.4481	9.7393
1000	1000	515.104	55.434	13.019	9.77167 + 2	2.88557 + 1	9.64389 - 1	7.4262 - 2	9.7107 - 1
1100	1100	514.747	55.077	12.821	9.73617	2.87509	9.60885	7.4043	9.6821
1200	1200	514.391	54.721	12.623	9.70077	2.86464	9.57392	7.3825	9.6536
1300	1300	514.034	54.364	12.425	9.66548	2.85422	9.53909	7.3607	9.6251
1400	1400	513.678	54.008	12.227	9.63030	2.84383	9.50436	7.3390	9.5967
1500	1500	513.321	53.651	12.028	9.59521	2.83347	9.46974	7.3174	9.5684
1600	1600	512.965	53.295	11.830	9.56023	2.82314	9.43522	7.2958	9.5402
1700	1700	512.608	52.938	11.632	9.52536	2.81284	9.40080	7.2742	9.5120
1800	1800	512.251	52.581	11.434	9.49059	2.80257	9.36648	7.2527	9.4838
1900	1900	511.895	52.225	11.236	9.45592	2.79233	9.33227	7.2312	9.4558
2000	2000	511.538	51.868	11.038	9.42135 + 2	2.78212 + 1	9.29815 - 1	7.2098 - 2	9.4278 - 1
2100	2100	511.182	51.512	10.840	9.38689	2.77195	9.26414	7.1885	9.3999
2200	2200	510.825	51.155	10.642	9.35253	2.76180	9.23023	7.1672	9.3720
2300	2300	510.469	50.799	10.444	9.31827	2.75168	9.19642	7.1459	9.3442
2400	2400	510.112	50.442	10.246	9.28411	2.74160	9.16271	7.1247	9.3164
2500	2500	509.756	50.086	10.048	9.25006	2.73154	9.12910	7.1035	9.2887
2600	2600	509.399	49.729	9.850	9.21611	2.72152	9.09559	7.0824	9.2611
2700	2700	509.043	49.373	9.651	9.18226	2.71152	9.06218	7.0613	9.2336
2800	2800	508.686	49.016	9.453	9.14851	2.70155	9.02887	7.0403	9.2061
2900	2900	508.330	48.660	9.255	9.11486	2.69162	8.99566	7.0193	9.1787
3000	3000	507.973	48.303	9.057	9.08131 + 2	2.68171 + 1	8.96255 - 1	6.9984 - 2	9.1513 - 1
3100	3100	507.617	47.947	8.859	9.04786	2.67183	8.92954	6.9775	9.1240
3200	3200	507.260	47.590	8.661	9.01451	2.66198	8.89663	6.9567	9.0967
3300	3299	506.904	47.234	8.463	8.98126	2.65217	8.86382	6.9359	9.0696
3400	3399	506.547	46.877	8.265	8.94811	2.64238	8.83110	6.9151	9.0425
3500	3499	506.191	46.521	8.067	8.91506	2.63262	8.79848	6.8945	9.0154
3600	3599	505.834	46.164	7.869	8.88211	2.62289	8.76596	6.8738	9.0884
3700	3699	505.478	45.808	7.671	8.84926	2.61319	8.73354	6.8532	9.0615
3800	3799	505.121	45.451	7.473	8.81651	2.60351	8.70122	6.8327	9.0346
3900	3899	504.765	45.095	7.275	8.78386	2.59387	8.66899	6.8122	9.0078
4000	3999	504.408	44.738	7.077	8.75130 + 2	2.58426 + 1	8.63686 - 1	6.7917 - 2	8.9811 - 1
4100	4099	504.052	44.382	6.879	8.71884	2.57467	8.60483	6.7713	8.9544
4200	4199	503.695	44.025	6.681	8.68648	2.56512	8.57289	6.7510	8.9278
4300	4299	503.339	43.669	6.483	8.65422	2.55559	8.54105	6.7307	8.9012
4400	4399	502.982	43.312	6.285	8.62206	2.54609	8.50931	6.7104	8.8747
4500	4499	502.626	42.956	6.087	8.58999	2.53662	8.47766	6.6902	8.8483
4600	4599	502.269	42.599	5.888	8.55802	2.52718	8.44611	6.6700	8.8219
4700	4699	501.913	42.243	5.690	8.52614	2.51777	8.41465	6.6499	8.6956
4800	4799	501.556	41.886	5.492	8.49437	2.50839	8.38329	6.6298	8.6693
4900	4899	501.200	41.530	5.294	8.46269	2.49903	8.35202	6.6098	8.6431
5000	4999	500.843	41.173	5.096	8.43110 + 2	2.48970 + 1	8.32085 - 1	6.5898 - 2	8.6170 - 1
5100	5099	500.487	40.817	4.898	8.39961	2.48040	8.28977	6.5699	8.5909
5200	5199	500.131	40.461	4.700	8.36822	2.47113	8.25879	6.5500	8.5649
5300	5299	499.774	40.104	4.502	8.33692	2.46189	8.22790	6.5301	8.5390
5400	5399	499.418	39.748	4.304	8.30572	2.45268	8.19711	6.5103	8.5131
5500	5499	499.061	39.391	4.106	8.27461	2.44349	8.16640	6.4906	8.4873
5600	5599	498.705	39.035	3.908	8.24360	2.43433	8.13580	6.4709	8.4615
5700	5699	498.348	38.678	3.710	8.21268	2.42520	8.10528	6.4512	8.4358
5800	5799	497.992	38.322	3.512	8.18185	2.41610	8.07486	6.4316	8.4102
5900	5899	497.636	37.966	3.314	8.15112	2.40702	8.04453	6.4120	8.3846
6000	5999	497.279	37.609	3.116	8.12048 + 2	2.39798 + 1	8.01430 - 1	6.3925 - 2	8.3590 - 1
6100	6099	496.923	37.253	2.918	8.08994	2.38896	7.98415	6.3730	8.3336
6200	6199	496.566	36.896	2.720	8.05949	2.37997	7.95410	6.3536	8.3082
6300	6299	496.210	36.540	2.522	8.02914	2.37100	7.92414	6.3342	8.2828
6400	6399	495.854	36.184	2.324	7.99887	2.36207	7.89427	6.3149	8.2575
6500	6499	495.497	35.827	2.126	7.96870	2.35316	7.86450	6.2956	8.2323
6600	6599	495.141	35.471	1.928	7.93862	2.34427	7.83481	6.2763	8.2071
6700	6699	494.784	35.114	1.730	7.90864	2.33542	7.80522	6.2571	8.1820
6800	6799	494.428	34.758	1.532	7.87874	2.32659	7.77571	6.2380	8.1570
6900	6899	494.072	34.402	1.334	7.84894	2.31779	7.74630	6.2189	8.1320

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
7000	7002	493.707	34.037	1.132	7.81853 + 2	2.30881 + 1	7.71629 - 1	6.1993 - 2	8.1064 - 1
7100	7102	493.350	33.680	0.933	7.78889	2.30006	7.68704	6.1803	8.0816
7200	7202	492.994	33.324	0.735	7.75935	2.29135	7.65788	6.1613	8.0567
7300	7303	492.637	32.967	0.537	7.72989	2.28264	7.62881	6.1424	8.0320
7400	7403	492.280	32.610	0.339	7.70053	2.27397	7.59983	6.1235	8.0072
7500	7503	491.924	32.254	0.141	7.67125	2.26532	7.57094	6.1046	7.9826
7600	7603	491.567	31.897	-0.057	7.64207	2.25670	7.54214	6.0858	7.9580
7700	7703	491.211	31.541	-0.255	7.61298	2.24811	7.51342	6.0670	7.9334
7800	7803	490.854	31.184	-0.453	7.58397	2.23955	7.48480	6.0483	7.9090
7900	7903	490.497	30.827	-0.651	7.55506	2.23101	7.45626	6.0296	7.8845
8000	8003	490.141	30.471	-0.850	7.52623 + 2	2.22250 + 1	7.42781 - 1	6.0110 - 2	7.8602 - 1
8100	8103	489.784	30.114	-1.048	7.49750	2.21401	7.39945	5.9924	7.8359
8200	8203	489.427	29.757	-1.246	7.46885	2.20555	7.37118	5.9739	7.8116
8300	8303	489.071	29.401	-1.444	7.44029	2.19712	7.34300	5.9554	7.7874
8400	8403	488.714	29.044	-1.642	7.41182	2.18871	7.31490	5.9369	7.7633
8500	8503	488.358	28.688	-1.840	7.38344	2.18033	7.28689	5.9185	7.7392
8600	8604	488.001	28.331	-2.038	7.35514	2.17197	7.25896	5.9001	7.7152
8700	8704	487.644	27.974	-2.236	7.32694	2.16364	7.23113	5.8818	7.6912
8800	8804	487.288	27.618	-2.435	7.29882	2.15534	7.20338	5.8635	7.6673
8900	8904	486.931	27.261	-2.633	7.27079	2.14706	7.17571	5.8453	7.6434
9000	9004	486.575	26.905	-2.831	7.24285 + 2	2.13881 + 1	7.14813 - 1	5.8271 - 2	7.6196 - 1
9100	9104	486.218	26.548	-3.029	7.21499	2.13059	7.12064	5.8089	7.5959
9200	9204	485.861	26.191	-3.227	7.18722	2.12238	7.09323	5.7908	7.5722
9300	9304	485.505	25.835	-3.425	7.15954	2.11421	7.06591	5.7727	7.5486
9400	9404	485.148	25.478	-3.623	7.13194	2.10606	7.03868	5.7547	7.5250
9500	9504	484.791	25.121	-3.821	7.10443	2.09794	7.01152	5.7367	7.5015
9600	9604	484.435	24.765	-4.020	7.07700	2.08984	6.98446	5.7188	7.4781
9700	9705	484.078	24.408	-4.218	7.04966	2.08177	6.95748	5.7009	7.4547
9800	9805	483.722	24.052	-4.416	7.02241	2.07372	6.93058	5.6830	7.4313
9900	9905	483.365	23.695	-4.614	6.99524	2.06569	6.90377	5.6652	7.4080
10000	10005	483.008	23.338	-4.812	6.96816 + 2	2.05770 + 1	6.87704 - 1	5.6475 - 2	7.3848 - 1
10100	10105	482.652	22.982	-5.010	6.94116	2.04972	6.85040	5.6297	7.3616
10200	10205	482.295	22.625	-5.208	6.91425	2.04178	6.82383	5.6121	7.3385
10300	10305	481.939	22.269	-5.406	6.88742	2.03385	6.79736	5.5944	7.3154
10400	10405	481.582	21.912	-5.604	6.86068	2.02596	6.77096	5.5768	7.2924
10500	10505	481.225	21.555	-5.803	6.83402	2.01808	6.74465	5.5593	7.2695
10600	10605	480.869	21.199	-6.001	6.80744	2.01024	6.71842	5.5418	7.2466
10700	10705	480.512	20.842	-6.199	6.78095	2.00241	6.69228	5.5243	7.2237
10800	10806	480.155	20.485	-6.397	6.75454	1.99461	6.66621	5.5069	7.2009
10900	10906	479.799	20.129	-6.595	6.72822	1.98684	6.64023	5.4895	7.1782
11000	11006	479.442	19.772	-6.793	6.70197 + 2	1.97909 + 1	6.61433 - 1	5.4721 - 2	7.1555 - 1
11100	11106	479.086	19.416	-6.991	6.67581	1.97137	6.58852	5.4548	7.1329
11200	11206	478.729	19.059	-7.189	6.64974	1.96367	6.56278	5.4376	7.1103
11300	11306	478.372	18.702	-7.388	6.62374	1.95599	6.53713	5.4203	7.0878
11400	11406	478.016	18.346	-7.586	6.59783	1.94834	6.51155	5.4032	7.0653
11500	11506	477.659	17.989	-7.784	6.57200	1.94071	6.48606	5.3860	7.0429
11600	11606	477.303	17.633	-7.982	6.54625	1.93311	6.46065	5.3689	7.0206
11700	11707	476.946	17.276	-8.180	6.52059	1.92553	6.43532	5.3519	6.9983
11800	11807	476.589	16.919	-8.378	6.49500	1.91797	6.41007	5.3349	6.9761
11900	11907	476.233	16.563	-8.576	6.46950	1.91044	6.38490	5.3179	6.9539
12000	12007	475.876	16.206	-8.774	6.44408 + 2	1.90294 + 1	6.35981 - 1	5.3010 - 2	6.9317 - 1
12100	12107	475.519	15.849	-8.973	6.41874	1.89545	6.33480	5.2841	6.9097
12200	12207	475.163	15.493	-9.171	6.39348	1.88799	6.30987	5.2673	6.8876
12300	12307	474.806	15.136	-9.369	6.36830	1.88056	6.28502	5.2505	6.8657
12400	12407	474.450	14.780	-9.567	6.34320	1.87315	6.26025	5.2337	6.8437
12500	12507	474.093	14.423	-9.765	6.31818	1.86576	6.23556	5.2170	6.8219
12600	12608	473.736	14.066	-9.963	6.29324	1.85839	6.21095	5.2003	6.8001
12700	12708	473.380	13.710	-10.161	6.26838	1.85105	6.18641	5.1837	6.7783
12800	12808	473.023	13.353	-10.359	6.24360	1.84374	6.16196	5.1671	6.7566
12900	12908	472.667	12.997	-10.557	6.21890	1.83644	6.13758	5.1505	6.7349
13000	13008	472.310	12.640	-10.756	6.19428 + 2	1.82917 + 1	6.11328 - 1	5.1340 - 2	6.7133 - 1
13100	13108	471.953	12.283	-10.954	6.16974	1.82192	6.08906	5.1175	6.6918
13200	13208	471.597	11.927	-11.152	6.14528	1.81470	6.06492	5.1011	6.6703
13300	13308	471.240	11.570	-11.350	6.12089	1.80750	6.04085	5.0847	6.6489
13400	13409	470.883	11.213	-11.548	6.09659	1.80032	6.01686	5.0683	6.6275
13500	13509	470.527	10.857	-11.746	6.07236	1.79317	5.99295	5.0520	6.6061
13600	13609	470.170	10.500	-11.944	6.04821	1.78603	5.96912	5.0357	6.5849
13700	13709	469.814	10.144	-12.142	6.02413	1.77893	5.94536	5.0195	6.5636
13800	13809	469.457	9.787	-12.341	6.00014	1.77184	5.92168	5.0033	6.5424
13900	13909	469.100	9.430	-12.539	5.97622	1.76478	5.89807	4.9871	6.5213
14000	14009	468.744	9.074	-12.737	5.95238 + 2	1.75774 + 1	5.87455 - 1	4.9710 - 2	6.5003 - 1
14100	14110	468.387	8.717	-12.935	5.92862	1.75072	5.85109	4.9549	6.4792
14200	14210	468.031	8.361	-13.133	5.90493	1.74373	5.82772	4.9389	6.4583
14300	14310	467.674	8.004	-13.331	5.88133	1.73675	5.80442	4.9229	6.4373
14400	14410	467.317	7.647	-13.529	5.85779	1.72981	5.78119	4.9070	6.4165
14500	14510	466.961	7.291	-13.727	5.83434	1.72288	5.75804	4.8910	6.3957
14600	14610	466.604	6.934	-13.926	5.81096	1.71597	5.73497	4.8752	6.3749
14700	14710	466.247	6.577	-14.124	5.78765	1.70909	5.71197	4.8593	6.3542
14800	14811	465.891	6.221	-14.322	5.76442	1.70223	5.68904	4.8435	6.3335
14900	14911	465.534	5.864	-14.520	5.74127	1.69540	5.66619	4.8278	6.3129

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
7000	6998	493.715	34.045	1.136	7.81923 + 2	2.30902 + 1	7.71698 - 1	6.1998 - 2	8.1070 - 1
7100	7098	493.359	33.689	0.938	7.78961	2.30027	7.68775	6.1808	8.0822
7200	7198	493.002	33.332	0.740	7.76008	2.29155	7.65860	6.1618	8.0573
7300	7297	492.646	32.976	0.542	7.73064	2.28286	7.62955	6.1429	8.0326
7400	7397	492.290	32.620	0.344	7.70130	2.27419	7.60059	6.1240	8.0079
7500	7497	491.933	32.263	0.146	7.67204	2.26555	7.57172	6.1051	7.9832
7600	7597	491.577	31.907	-0.052	7.64288	2.25694	7.54293	6.0863	7.9587
7700	7697	491.221	31.551	-0.250	7.61380	2.24835	7.51424	6.0676	7.9341
7800	7797	490.864	31.194	-0.448	7.58482	2.23980	7.48563	6.0489	7.9097
7900	7897	490.508	30.838	-0.646	7.55592	2.23126	7.45711	6.0302	7.8853
8000	7997	490.152	30.482	-0.844	7.52711 + 2	2.22276 + 1	7.42868 - 1	6.0116 - 2	7.8609 - 1
8100	8097	489.795	30.125	-1.041	7.49840	2.21428	7.40034	5.9930	7.8366
8200	8197	489.439	29.769	-1.239	7.46977	2.20582	7.37209	5.9745	7.8124
8300	8297	489.083	29.413	-1.437	7.44123	2.19739	7.34392	5.9560	7.7882
8400	8397	488.726	29.056	-1.635	7.41278	2.18899	7.31585	5.9375	7.7641
8500	8497	488.370	28.700	-1.833	7.38442	2.18062	7.28786	5.9191	7.7400
8600	8596	488.014	28.344	-2.031	7.35615	2.17227	7.25995	5.9008	7.7160
8700	8696	487.657	27.987	-2.229	7.32796	2.16395	7.23213	5.8824	7.6921
8800	8796	487.301	27.631	-2.427	7.29986	2.15565	7.20440	5.8642	7.6682
8900	8896	486.945	27.275	-2.625	7.27185	2.14738	7.17676	5.8460	7.6443
9000	8996	486.588	26.918	-2.823	7.24393 + 2	2.13913 + 1	7.14920 - 1	5.8278 - 2	7.6206 - 1
9100	9096	486.232	26.562	-3.021	7.21609	2.13091	7.12173	5.8096	7.5968
9200	9196	485.876	26.206	-3.219	7.18834	2.12272	7.09434	5.7915	7.5732
9300	9296	485.519	25.849	-3.417	7.16068	2.11455	7.06704	5.7735	7.5496
9400	9396	485.163	25.493	-3.615	7.13311	2.10641	7.03983	5.7555	7.5260
9500	9496	484.807	25.137	-3.813	7.10562	2.09829	7.01270	5.7375	7.5025
9600	9596	484.451	24.781	-4.011	7.07821	2.09020	6.98565	5.7196	7.4791
9700	9695	484.094	24.424	-4.209	7.05090	2.08213	6.95869	5.7017	7.4557
9800	9795	483.738	24.068	-4.407	7.02366	2.07409	6.93182	5.6839	7.4324
9900	9895	483.382	23.712	-4.605	6.99652	2.06607	6.90503	5.6661	7.4091
10000	9995	483.025	23.355	-4.803	6.96946 + 2	2.05808 + 1	6.87832 - 1	5.6483 - 2	7.3859 - 1
10100	10095	482.669	22.999	-5.000	6.94248	2.05011	6.85170	5.6306	7.3627
10200	10195	482.313	22.643	-5.198	6.91559	2.04217	6.82516	5.6129	7.3396
10300	10295	481.957	22.287	-5.396	6.88878	2.03426	6.79870	5.5953	7.3166
10400	10395	481.600	21.930	-5.594	6.86206	2.02637	6.77233	5.5777	7.2936
10500	10495	481.244	21.574	-5.792	6.83542	2.01850	6.74604	5.5602	7.2707
10600	10595	480.888	21.218	-5.990	6.80887	2.01066	6.71983	5.5427	7.2478
10700	10695	480.532	20.862	-6.188	6.78240	2.00284	6.69371	5.5252	7.2250
10800	10794	480.175	20.505	-6.386	6.75602	1.99505	6.66767	5.5078	7.2022
10900	10894	479.819	20.149	-6.584	6.72971	1.98728	6.64171	5.4905	7.1795
11000	10994	479.463	19.793	-6.782	6.70349 + 2	1.97954 + 1	6.61583 - 1	5.4731 - 2	7.1568 - 1
11100	11094	479.107	19.437	-6.980	6.67736	1.97182	6.59004	5.4558	7.1342
11200	11194	478.750	19.080	-7.178	6.65130	1.96413	6.56432	5.4386	7.1117
11300	11294	478.394	18.724	-7.375	6.62533	1.95646	6.53869	5.4214	7.0892
11400	11394	478.038	18.368	-7.573	6.59944	1.94881	6.51314	5.4042	7.0667
11500	11494	477.682	18.012	-7.771	6.57364	1.94119	6.48767	5.3871	7.0444
11600	11594	477.326	17.656	-7.969	6.54791	1.93360	6.46229	5.3700	7.0220
11700	11693	476.969	17.299	-8.167	6.52227	1.92603	6.43698	5.3530	6.9998
11800	11793	476.613	16.943	-8.365	6.49671	1.91848	6.41175	5.3360	6.9775
11900	11893	476.257	16.587	-8.563	6.47123	1.91095	6.38661	5.3191	6.9554
12000	11993	475.901	16.231	-8.761	6.44583 + 2	1.90345 + 1	6.36154 - 1	5.3022 - 2	6.9333 - 1
12100	12093	475.544	15.874	-8.959	6.42051	1.89598	6.33656	5.2853	6.9112
12200	12193	475.188	15.518	-9.157	6.39528	1.88852	6.31165	5.2685	6.8892
12300	12293	474.832	15.162	-9.354	6.37012	1.88110	6.28682	5.2517	6.8672
12400	12393	474.476	14.806	-9.552	6.34505	1.87369	6.26207	5.2349	6.8453
12500	12493	474.120	14.450	-9.750	6.32005	1.86631	6.23741	5.2182	6.8235
12600	12592	473.764	14.094	-9.948	6.29514	1.85895	6.21282	5.2016	6.8017
12700	12692	473.407	13.737	-10.146	6.27030	1.85162	6.18831	5.1849	6.7800
12800	12792	473.051	13.381	-10.344	6.24555	1.84431	6.16387	5.1684	6.7583
12900	12892	472.695	13.025	-10.542	6.22087	1.83702	6.13952	5.1518	6.7367
13000	12992	472.339	12.669	-10.740	6.19627 + 2	1.82976 + 1	6.11525 - 1	5.1353 - 2	6.7151 - 1
13100	13092	471.983	12.313	-10.937	6.17176	1.82252	6.09105	5.1189	6.6936
13200	13192	471.626	11.956	-11.135	6.14732	1.81530	6.06693	5.1024	6.6721
13300	13292	471.270	11.600	-11.333	6.12296	1.80811	6.04289	5.0861	6.6507
13400	13391	470.914	11.244	-11.531	6.09867	1.80094	6.01892	5.0697	6.6293
13500	13491	470.558	10.888	-11.729	6.07447	1.79379	5.99504	5.0534	6.6080
13600	13591	470.202	10.532	-11.927	6.05034	1.78667	5.97123	5.0372	6.5867
13700	13691	469.846	10.176	-12.125	6.02630	1.77956	5.94749	5.0209	6.5655
13800	13791	469.490	9.820	-12.322	6.00233	1.77249	5.92384	5.0048	6.5444
13900	13891	469.133	9.463	-12.520	5.97843	1.76543	5.90026	4.9886	6.5233
14000	13991	468.777	9.107	-12.718	5.95462 + 2	1.75840 + 1	5.87675 - 1	4.9725 - 2	6.5022 - 1
14100	14090	468.421	8.751	-12.916	5.93088	1.75139	5.85332	4.9565	6.4812
14200	14190	468.065	8.395	-13.114	5.90722	1.74440	5.82997	4.9405	6.4603
14300	14290	467.709	8.039	-13.312	5.88363	1.73744	5.80670	4.9245	6.4394
14400	14390	467.353	7.683	-13.510	5.86013	1.73049	5.78350	4.9085	6.4186
14500	14490	466.997	7.327	-13.707	5.83670	1.72358	5.76037	4.8926	6.3978
14600	14590	466.640	6.970	-13.905	5.81334	1.71668	5.73732	4.8768	6.3770
14700	14690	466.284	6.614	-14.103	5.79006	1.70980	5.71435	4.8610	6.3563
14800	14790	465.928	6.258	-14.301	5.76686	1.70295	5.69145	4.8452	6.3357
14900	14889	465.572	5.902	-14.499	5.74373	1.69612	5.66862	4.8294	6.3151



TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
15000	15011	465.178	5.508	-14.718	5.71819 + 2	1.68858 + 1	5.64342 - 1	4.8120 - 2	6.2924 - 1
15100	15111	464.821	5.151	-14.916	5.69519	1.68179	5.62071	4.7964	6.2719
15200	15211	464.464	4.794	-15.114	5.67226	1.67502	5.59809	4.7807	6.2514
15300	15311	464.108	4.438	-15.312	5.64941	1.66827	5.57553	4.7651	6.2310
15400	15411	463.751	4.081	-15.510	5.62663	1.66154	5.55305	4.7496	6.2107
15500	15512	463.395	3.725	-15.709	5.60393	1.65484	5.53064	4.7340	6.1904
15600	15612	463.038	3.368	-15.907	5.58130	1.64816	5.50831	4.7185	6.1701
15700	15712	462.681	3.011	-16.105	5.55874	1.64150	5.48605	4.7031	6.1499
15800	15812	462.325	2.655	-16.303	5.53626	1.63486	5.46386	4.6877	6.1298
15900	15912	461.968	2.298	-16.501	5.51385	1.62824	5.44175	4.6723	6.1097
16000	16012	461.611	1.941	-16.699	5.49152 + 2	1.62164 + 1	5.41971 - 1	4.6570 - 2	6.0896 - 1
16100	16112	461.255	1.585	-16.897	5.46925	1.61507	5.39773	4.6417	6.0696
16200	16213	460.898	1.228	-17.095	5.44707	1.60852	5.37584	4.6264	6.0497
16300	16313	460.542	0.872	-17.294	5.42495	1.60199	5.35401	4.6112	6.0298
16400	16413	460.185	0.515	-17.492	5.40291	1.59548	5.33226	4.5961	6.0099
16500	16513	459.828	0.158	-17.690	5.38094	1.58899	5.31057	4.5809	5.9901
16600	16613	459.472	-0.198	-17.888	5.35904	1.58252	5.28896	4.5658	5.9704
16700	16713	459.115	-0.555	-18.086	5.33722	1.57608	5.26742	4.5508	5.9507
16800	16814	458.759	-0.911	-18.284	5.31546	1.56966	5.24596	4.5357	5.9311
16900	16914	458.402	-1.268	-18.482	5.29378	1.56325	5.22456	4.5207	5.9115
17000	17014	458.045	-1.625	-18.680	5.27217 + 2	1.55687 + 1	5.20323 - 1	4.5058 - 2	5.8919 - 1
17100	17114	457.689	-1.981	-18.879	5.25064	1.55051	5.18197	4.4909	5.8724
17200	17214	457.332	-2.338	-19.077	5.22917	1.54417	5.16079	4.4760	5.8530
17300	17314	456.975	-2.695	-19.275	5.20777	1.53785	5.13967	4.4612	5.8336
17400	17415	456.619	-3.051	-19.473	5.18645	1.53156	5.11863	4.4464	5.8142
17500	17515	456.262	-3.408	-19.671	5.16519	1.52528	5.09765	4.4316	5.7949
17600	17615	455.906	-3.764	-19.869	5.14401	1.51903	5.07674	4.4169	5.7757
17700	17715	455.549	-4.121	-20.067	5.12290	1.51279	5.05591	4.4022	5.7565
17800	17815	455.192	-4.478	-20.265	5.10185	1.50658	5.03514	4.3876	5.7373
17900	17915	454.836	-4.834	-20.463	5.08088	1.50038	5.01444	4.3729	5.7182
18000	18016	454.479	-5.191	-20.662	5.05998 + 2	1.49421 + 1	4.99381 - 1	4.3584 - 2	5.6991 - 1
18100	18116	454.122	-5.547	-20.860	5.03915	1.48806	4.97325	4.3438	5.6801
18200	18216	453.766	-5.904	-21.058	5.01838	1.48193	4.95276	4.3293	5.6612
18300	18316	453.409	-6.261	-21.256	4.99769	1.47582	4.93233	4.3149	5.6423
18400	18416	453.053	-6.617	-21.454	4.97706	1.46973	4.91198	4.3005	5.6234
18500	18516	452.696	-6.974	-21.652	4.95651	1.46366	4.89169	4.2861	5.6046
18600	18617	452.339	-7.331	-21.850	4.93602	1.45761	4.87147	4.2717	5.5858
18700	18717	451.983	-7.687	-22.048	4.91560	1.45158	4.85132	4.2574	5.5671
18800	18817	451.626	-8.044	-22.247	4.89525	1.44557	4.83124	4.2431	5.5484
18900	18917	451.270	-8.400	-22.445	4.87497	1.43958	4.81122	4.2289	5.5298
19000	19017	450.913	-8.757	-22.643	4.85475 + 2	1.43361 + 1	4.79127 - 1	4.2147 - 2	5.5112 - 1
19100	19118	450.556	-9.114	-22.841	4.83461	1.42766	4.77139	4.2005	5.4927
19200	19218	450.200	-9.470	-23.039	4.81453	1.42173	4.75157	4.1864	5.4742
19300	19318	449.843	-9.827	-23.237	4.79452	1.41582	4.73182	4.1723	5.4558
19400	19418	449.486	-10.184	-23.435	4.77458	1.40993	4.71214	4.1582	5.4374
19500	19518	449.130	-10.540	-23.633	4.75470	1.40406	4.69252	4.1442	5.4191
19600	19618	448.773	-10.897	-23.832	4.73489	1.39821	4.67297	4.1302	5.4008
19700	19719	448.417	-11.253	-24.030	4.71515	1.39238	4.65349	4.1163	5.3826
19800	19819	448.060	-11.610	-24.228	4.69547	1.38657	4.63407	4.1024	5.3644
19900	19919	447.703	-11.967	-24.426	4.67586	1.38078	4.61472	4.0885	5.3462
20000	20019	447.347	-12.323	-24.624	4.65632 + 2	1.37501 + 1	4.59543 - 1	4.0746 - 2	5.3281 - 1
20100	20119	446.990	-12.680	-24.822	4.63685	1.36926	4.57621	4.0608	5.3101
20200	20220	446.634	-13.036	-25.020	4.61743	1.36353	4.55705	4.0471	5.2921
20300	20320	446.277	-13.393	-25.218	4.59809	1.35782	4.53796	4.0333	5.2741
20400	20420	445.920	-13.750	-25.416	4.57881	1.35212	4.51894	4.0196	5.2562
20500	20520	445.564	-14.106	-25.615	4.55960	1.34645	4.49997	4.0060	5.2383
20600	20620	445.207	-14.463	-25.813	4.54045	1.34079	4.48108	3.9923	5.2205
20700	20721	444.850	-14.820	-26.011	4.52137	1.33516	4.46224	3.9787	5.2027
20800	20821	444.494	-15.176	-26.209	4.50235	1.32954	4.44347	3.9652	5.1850
20900	20921	444.137	-15.533	-26.407	4.48340	1.32395	4.42477	3.9517	5.1673
21000	21021	443.781	-15.889	-26.605	4.46451 + 2	1.31837 + 1	4.40613 - 1	3.9382 - 2	5.1497 - 1
21100	21121	443.424	-16.246	-26.803	4.44568	1.31281	4.38755	3.9247	5.1321
21200	21222	443.067	-16.603	-27.001	4.42692	1.30727	4.36904	3.9113	5.1145
21300	21322	442.711	-16.959	-27.200	4.40823	1.30175	4.35058	3.8979	5.0970
21400	21422	442.354	-17.316	-27.398	4.38960	1.29625	4.33220	3.8846	5.0796
21500	21522	441.998	-17.672	-27.596	4.37103	1.29076	4.31387	3.8713	5.0622
21600	21622	441.641	-18.029	-27.794	4.35253	1.28530	4.29561	3.8580	5.0448
21700	21723	441.284	-18.386	-27.992	4.33409	1.27985	4.27741	3.8448	5.0275
21800	21823	440.928	-18.742	-28.190	4.31571	1.27443	4.25927	3.8316	5.0102
21900	21923	440.571	-19.099	-28.388	4.29739	1.26902	4.24120	3.8184	4.9930
22000	22023	440.214	-19.456	-28.586	4.27914 + 2	1.26363 + 1	4.22319 - 1	3.8052 - 2	4.9758 - 1
22100	22123	439.858	-19.812	-28.785	4.26096	1.25826	4.20524	3.7921	4.9587
22200	22224	439.501	-20.169	-28.983	4.24283	1.25291	4.18735	3.7791	4.9416
22300	22324	439.145	-20.525	-29.181	4.22477	1.24757	4.16952	3.7660	4.9246
22400	22424	438.788	-20.882	-29.379	4.20677	1.24226	4.15176	3.7530	4.9076
22500	22524	438.431	-21.239	-29.577	4.18883	1.23696	4.13405	3.7401	4.8906
22600	22625	438.075	-21.595	-29.775	4.17095	1.23168	4.11641	3.7271	4.8737
22700	22725	437.718	-21.952	-29.973	4.15314	1.22642	4.09883	3.7143	4.8569
22800	22825	437.362	-22.308	-30.171	4.13538	1.22118	4.08131	3.7014	4.8400
22900	22925	437.005	-22.665	-30.369	4.11769	1.21595	4.06384	3.6886	4.8233

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
15000	14989	465.216	5.546	-14.697	5.72068 + 2	1.68931 + 1	5.64587 - 1	4.8137 - 2	6.2946 - 1
15100	15089	464.860	5.190	-14.894	5.69770	1.68253	5.62319	4.7981	6.2741
15200	15189	464.504	4.834	-15.092	5.67480	1.67577	5.60059	4.7825	6.2537
15300	15289	464.148	4.478	-15.290	5.65197	1.66903	5.57806	4.7669	6.2333
15400	15389	463.792	4.122	-15.488	5.62921	1.66231	5.55560	4.7513	6.2130
15500	15488	463.436	3.766	-15.686	5.60654	1.65561	5.53322	4.7358	6.1927
15600	15588	463.079	3.409	-15.884	5.58393	1.64893	5.51091	4.7204	6.1725
15700	15688	462.723	3.053	-16.081	5.56140	1.64228	5.48868	4.7049	6.1523
15800	15788	462.367	2.697	-16.279	5.53894	1.63565	5.46651	4.6895	6.1322
15900	15888	462.011	2.341	-16.477	5.51656	1.62904	5.44442	4.6742	6.1121
16000	15988	461.655	1.985	-16.675	5.49425 + 2	1.62245 + 1	5.42241 - 1	4.6589 - 2	6.0921 - 1
16100	16088	461.299	1.629	-16.873	5.47202	1.61589	5.40046	4.6436	6.0721
16200	16187	460.943	1.273	-17.071	5.44985	1.60934	5.37859	4.6284	6.0522
16300	16287	460.587	0.917	-17.268	5.42776	1.60282	5.35679	4.6132	6.0323
16400	16387	460.231	0.561	-17.466	5.40575	1.59632	5.33506	4.5980	6.0125
16500	16487	459.875	0.205	-17.664	5.38380	1.58984	5.31340	4.5829	5.9927
16600	16587	459.519	-0.151	-17.862	5.36193	1.58338	5.29181	4.5678	5.9730
16700	16687	459.163	-0.507	-18.060	5.34013	1.57694	5.27030	4.5528	5.9533
16800	16786	458.807	-0.863	-18.257	5.31840	1.57052	5.24885	4.5378	5.9337
16900	16886	458.451	-1.219	-18.455	5.29675	1.56413	5.22748	4.5228	5.9141
17000	16986	458.095	-1.575	-18.653	5.27516 + 2	1.55775 + 1	5.20618 - 1	4.5079 - 2	5.8946 - 1
17100	17086	457.739	-1.931	-18.851	5.25365	1.55140	5.18495	4.4930	5.8751
17200	17186	457.383	-2.287	-19.049	5.23221	1.54507	5.16379	4.4781	5.8557
17300	17286	457.027	-2.643	-19.246	5.21084	1.53876	5.14270	4.4633	5.8363
17400	17385	456.671	-2.999	-19.444	5.18954	1.53247	5.12168	4.4485	5.8170
17500	17485	456.315	-3.355	-19.642	5.16831	1.52620	5.10072	4.4338	5.7977
17600	17585	455.959	-3.711	-19.840	5.14715	1.51995	5.07984	4.4191	5.7785
17700	17685	455.602	-4.068	-20.038	5.12606	1.51373	5.05903	4.4044	5.7593
17800	17785	455.246	-4.424	-20.235	5.10505	1.50752	5.03829	4.3898	5.7402
17900	17885	454.890	-4.780	-20.433	5.08410	1.50133	5.01761	4.3752	5.7211
18000	17984	454.534	-5.136	-20.631	5.06322 + 2	1.49517 + 1	4.99701 - 1	4.3606 - 2	5.7021 - 1
18100	18084	454.178	-5.492	-20.829	5.04241	1.48902	4.97647	4.3461	5.6831
18200	18184	453.822	-5.848	-21.026	5.02167	1.48290	4.95601	4.3316	5.6642
18300	18284	453.466	-6.204	-21.224	5.00100	1.47680	4.93561	4.3172	5.6453
18400	18384	453.110	-6.559	-21.422	4.98040	1.47071	4.91528	4.3028	5.6265
18500	18484	452.755	-6.915	-21.620	4.95987	1.46465	4.89501	4.2884	5.6077
18600	18583	452.399	-7.271	-21.817	4.93941	1.45861	4.87482	4.2741	5.5889
18700	18683	452.043	-7.627	-22.015	4.91902	1.45258	4.85469	4.2598	5.5702
18800	18783	451.687	-7.983	-22.213	4.89869	1.44658	4.83463	4.2455	5.5516
18900	18883	451.331	-8.339	-22.411	4.87843	1.44060	4.81464	4.2313	5.5330
19000	18983	450.975	-8.695	-22.609	4.85825 + 2	1.43444 + 1	4.79472 - 1	4.2171 - 2	5.5144 - 1
19100	19083	450.619	-9.051	-22.806	4.83812	1.42870	4.77486	4.2030	5.4959
19200	19182	450.263	-9.407	-23.004	4.81807	1.42278	4.75507	4.1889	5.4775
19300	19282	449.907	-9.763	-23.202	4.79809	1.41687	4.73534	4.1748	5.4591
19400	19382	449.551	-10.119	-23.400	4.77817	1.41099	4.71568	4.1608	5.4407
19500	19482	449.195	-10.475	-23.597	4.75832	1.40513	4.69609	4.1468	5.4224
19600	19582	448.839	-10.831	-23.795	4.73853	1.39929	4.67657	4.1328	5.4042
19700	19681	448.483	-11.187	-23.993	4.71881	1.39347	4.65711	4.1189	5.3859
19800	19781	448.127	-11.543	-24.191	4.69916	1.38766	4.63771	4.1050	5.3678
19900	19881	447.771	-11.899	-24.388	4.67958	1.38188	4.61839	4.0911	5.3497
20000	19981	447.415	-12.255	-24.586	4.66006 + 2	1.37612 + 1	4.59912 - 1	4.0773 - 2	5.3316 - 1
20100	20081	447.059	-12.611	-24.784	4.64061	1.37037	4.57993	4.0635	5.3135
20200	20180	446.703	-12.967	-24.982	4.62122	1.36465	4.56079	4.0497	5.2956
20300	20280	446.347	-13.323	-25.179	4.60190	1.35894	4.54173	4.0360	5.2776
20400	20380	445.991	-13.679	-25.377	4.58265	1.35326	4.52272	4.0224	5.2597
20500	20480	445.636	-14.034	-25.575	4.56346	1.34759	4.50379	4.0087	5.2419
20600	20580	445.280	-14.390	-25.772	4.54434	1.34194	4.48491	3.9951	5.2241
20700	20679	444.924	-14.746	-25.970	4.52528	1.33631	4.46610	3.9815	5.2064
20800	20779	444.568	-15.102	-26.168	4.50629	1.33071	4.44736	3.9680	5.1887
20900	20879	444.212	-15.458	-26.366	4.48736	1.32512	4.42868	3.9545	5.1710
21000	20979	443.856	-15.814	-26.563	4.46849 + 2	1.31955 + 1	4.41006 - 1	3.9410 - 2	5.1534 - 1
21100	21079	443.500	-16.170	-26.761	4.44969	1.31399	4.39151	3.9276	5.1358
21200	21178	443.144	-16.526	-26.959	4.43096	1.30846	4.37302	3.9142	5.1183
21300	21278	442.788	-16.882	-27.157	4.41229	1.30295	4.35459	3.9008	5.1008
21400	21378	442.432	-17.238	-27.354	4.39368	1.29745	4.33622	3.8875	5.0834
21500	21478	442.077	-17.593	-27.552	4.37514	1.29198	4.31792	3.8742	5.0660
21600	21578	441.721	-17.949	-27.750	4.35666	1.28652	4.29969	3.8610	5.0487
21700	21677	441.365	-18.305	-27.947	4.33824	1.28108	4.28151	3.8477	5.0314
21800	21777	441.009	-18.661	-28.145	4.31989	1.27566	4.26340	3.8346	5.0142
21900	21877	440.653	-19.017	-28.343	4.30160	1.27026	4.24535	3.8214	4.9970
22000	21977	440.297	-19.373	-28.540	4.28337 + 2	1.26488 + 1	4.22736 - 1	3.8083 - 2	4.9798 - 1
22100	22077	439.941	-19.729	-28.738	4.26520	1.25951	4.20943	3.7952	4.9627
22200	22176	439.585	-20.085	-28.936	4.24710	1.25417	4.19156	3.7822	4.9457
22300	22276	439.230	-20.440	-29.134	4.22906	1.24884	4.17376	3.7691	4.9286
22400	22376	438.874	-20.796	-29.331	4.21109	1.24353	4.15602	3.7562	4.9117
22500	22476	438.518	-21.152	-29.529	4.19317	1.23824	4.13834	3.7432	4.8947
22600	22576	438.162	-21.508	-29.727	4.17532	1.23297	4.12072	3.7303	4.8779
22700	22675	437.806	-21.864	-29.924	4.15753	1.22772	4.10316	3.7174	4.8610
22800	22775	437.450	-22.220	-30.122	4.13980	1.22248	4.08566	3.7046	4.8442
22900	22875	437.095	-22.575	-30.320	4.12213	1.21726	4.06823	3.6918	4.8275

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
23000	23025	436.648	-23.022	-30.568	4.10006 + 2	1.21075 + 1	4.04645 - 1	3.6758 - 2	4.8065 - 1
23100	23126	436.292	-23.378	-30.766	4.08249	1.20556	4.02911	3.6630	4.7899
23200	23226	435.935	-23.735	-30.964	4.06498	1.20039	4.01183	3.6503	4.7732
23300	23326	435.578	-24.092	-31.162	4.04754	1.19524	3.99461	3.6376	4.7566
23400	23426	435.222	-24.448	-31.360	4.03015	1.19010	3.97745	3.6249	4.7401
23500	23527	434.865	-24.805	-31.558	4.01282	1.18499	3.96035	3.6123	4.7236
23600	23627	434.509	-25.161	-31.756	3.99556	1.17989	3.94331	3.5997	4.7071
23700	23727	434.152	-25.518	-31.954	3.97835	1.17481	3.92633	3.5872	4.6907
23800	23827	433.795	-25.875	-32.153	3.96121	1.16974	3.90941	3.5746	4.6743
23900	23927	433.439	-26.231	-32.351	3.94412	1.16470	3.89255	3.5622	4.6580
24000	24028	433.082	-26.588	-32.549	3.92710 + 2	1.15967 + 1	3.87574 - 1	3.5497 - 2	4.6417 - 1
24100	24128	432.726	-26.944	-32.747	3.91013	1.15466	3.85900	3.5373	4.6254
24200	24228	432.369	-27.301	-32.945	3.89322	1.14967	3.84231	3.5249	4.6092
24300	24328	432.012	-27.658	-33.143	3.87637	1.14469	3.82568	3.5125	4.5931
24400	24429	431.656	-28.014	-33.341	3.85959	1.13974	3.80912	3.5002	4.5770
24500	24529	431.299	-28.371	-33.539	3.84286	1.13480	3.79260	3.4879	4.5609
24600	24629	430.942	-28.728	-33.738	3.82619	1.12987	3.77615	3.4757	4.5449
24700	24729	430.586	-29.084	-33.936	3.80957	1.12497	3.75976	3.4634	4.5289
24800	24830	430.229	-29.441	-34.134	3.79302	1.12008	3.74342	3.4512	4.5129
24900	24930	429.873	-29.797	-34.332	3.77652	1.11521	3.72714	3.4391	4.4970
25000	25030	429.516	-30.154	-34.530	3.76009 + 2	1.11035 + 1	3.71092 - 1	3.4270 - 2	4.4812 - 1
25100	25130	429.159	-30.511	-34.728	3.74371	1.10552	3.69475	3.4149	4.4654
25200	25230	428.803	-30.867	-34.926	3.72739	1.10070	3.67864	3.4028	4.4496
25300	25331	428.446	-31.224	-35.124	3.71112	1.09589	3.66259	3.3908	4.4339
25400	25431	428.090	-31.580	-35.322	3.69492	1.09111	3.64660	3.3788	4.4182
25500	25531	427.733	-31.937	-35.521	3.67877	1.08634	3.63066	3.3668	4.4025
25600	25631	427.376	-32.294	-35.719	3.66267	1.08159	3.61478	3.3549	4.3869
25700	25732	427.020	-32.650	-35.917	3.64664	1.07685	3.59895	3.3430	4.3714
25800	25832	426.663	-33.007	-36.115	3.63066	1.07213	3.58319	3.3311	4.3559
25900	25932	426.306	-33.364	-36.313	3.61474	1.06743	3.56747	3.3193	4.3404
26000	26032	425.950	-33.720	-36.511	3.59888 + 2	1.06275 + 1	3.55181 - 1	3.3075 - 2	4.3250 - 1
26100	26133	425.593	-34.077	-36.709	3.58307	1.05808	3.53621	3.2957	4.3096
26200	26233	425.237	-34.433	-36.907	3.56732	1.05343	3.52067	3.2840	4.2942
26300	26333	424.880	-34.790	-37.104	3.55162	1.04879	3.50518	3.2723	4.2789
26400	26433	424.523	-35.147	-37.304	3.53598	1.04417	3.48974	3.2606	4.2637
26500	26534	424.167	-35.503	-37.502	3.52040	1.03957	3.47436	3.2490	4.2484
26600	26634	423.810	-35.860	-37.700	3.50487	1.03499	3.45904	3.2374	4.2333
26700	26734	423.454	-36.216	-37.898	3.48940	1.03042	3.44377	3.2258	4.2181
26800	26834	423.097	-36.573	-38.096	3.47398	1.02587	3.42855	3.2142	4.2030
26900	26935	422.740	-36.930	-38.294	3.45862	1.02133	3.41339	3.2027	4.1880
27000	27035	422.384	-37.286	-38.492	3.44331 + 2	1.01681 + 1	3.39828 - 1	3.1912 - 2	4.1730 - 1
27100	27135	422.027	-37.643	-38.691	3.42806	1.01230	3.38323	3.1798	4.1580
27200	27236	421.670	-38.000	-38.889	3.41286	1.00782	3.36823	3.1684	4.1430
27300	27336	421.314	-38.356	-39.087	3.39772	1.00335	3.35329	3.1570	4.1282
27400	27436	420.957	-38.713	-39.285	3.38263	9.98889 + 0	3.33839	3.1456	4.1133
27500	27536	420.601	-39.069	-39.483	3.36759	9.94450	3.32356	3.1343	4.0985
27600	27637	420.244	-39.426	-39.681	3.35261	9.90026	3.30877	3.1230	4.0837
27700	27737	419.887	-39.783	-39.879	3.33769	9.85619	3.29404	3.1117	4.0690
27800	27837	419.531	-40.139	-40.077	3.32281	9.81227	3.27936	3.1005	4.0543
27900	27937	419.174	-40.496	-40.275	3.30800	9.76851	3.26474	3.0893	4.0397
28000	28038	418.818	-40.852	-40.474	3.29323 + 2	9.72491 + 0	3.25017 - 1	3.0781 - 2	4.0251 - 1
28100	28138	418.461	-41.209	-40.672	3.27852	9.68147	3.23565	3.0670	4.0105
28200	28238	418.104	-41.566	-40.870	3.26386	9.63818	3.22118	3.0559	3.9960
28300	28338	417.748	-41.922	-41.068	3.24926	9.59505	3.20677	3.0448	3.9815
28400	28439	417.391	-42.279	-41.266	3.23470	9.55208	3.19241	3.0338	3.9670
28500	28539	417.034	-42.636	-41.464	3.22021	9.50926	3.17810	3.0227	3.9526
28600	28639	416.678	-42.992	-41.662	3.20576	9.46660	3.16384	3.0118	3.9383
28700	28740	416.321	-43.349	-41.860	3.19136	9.42410	3.14963	3.0008	3.9239
28800	28840	415.965	-43.705	-42.059	3.17702	9.38174	3.13548	2.9899	3.9097
28900	28940	415.608	-44.062	-42.257	3.16273	9.33955	3.12138	2.9790	3.8954
29000	29040	415.251	-44.419	-42.455	3.14850 + 2	9.29750 + 0	3.10732 - 1	2.9681 - 2	3.8812 - 1
29100	29141	414.895	-44.775	-42.653	3.13431	9.25561	3.09332	2.9573	3.8670
29200	29241	414.538	-45.132	-42.851	3.12018	9.21388	3.07937	2.9465	3.8529
29300	29341	414.182	-45.488	-43.049	3.10609	9.17229	3.06548	2.9357	3.8388
29400	29442	413.825	-45.845	-43.247	3.09206	9.13086	3.05163	2.9250	3.8248
29500	29542	413.468	-46.202	-43.445	3.07808	9.08958	3.03783	2.9143	3.8108
29600	29642	413.112	-46.558	-43.644	3.06416	9.04845	3.02409	2.9036	3.7968
29700	29742	412.755	-46.915	-43.842	3.05028	9.00747	3.01039	2.8929	3.7829
29800	29843	412.398	-47.272	-44.040	3.03645	8.96665	2.99675	2.8823	3.7690
29900	29943	412.042	-47.628	-44.238	3.02268	8.92597	2.98315	2.8717	3.7551
30000	30043	411.685	-47.985	-44.436	3.00895 + 2	8.88544 + 0	2.96961 - 1	2.8611 - 2	3.7413 - 1
30100	30144	411.329	-48.341	-44.634	2.99528	8.84506	2.95611	2.8506	3.7275
30200	30244	410.972	-48.698	-44.832	2.98166	8.80483	2.94267	2.8401	3.7138
30300	30344	410.615	-49.055	-45.030	2.96808	8.76475	2.92927	2.8296	3.7001
30400	30444	410.259	-49.411	-45.228	2.95456	8.72481	2.91592	2.8192	3.6865
30500	30545	409.902	-49.768	-45.427	2.94109	8.68502	2.90263	2.8088	3.6728
30600	30645	409.545	-50.124	-45.625	2.92766	8.64539	2.88938	2.7984	3.6593
30700	30745	409.189	-50.481	-45.823	2.91429	8.60589	2.87618	2.7880	3.6457
30800	30846	408.832	-50.838	-46.021	2.90096	8.56654	2.86303	2.7777	3.6322
30900	30946	408.476	-51.194	-46.219	2.88769	8.52734	2.84993	2.7674	3.6188

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
23000	22975	436.739	-22.931	-30.517	4.10452 + 2	1.21206 + 1	4.05085 - 1	3.6790 - 2	4.8108 - 1
23100	23074	436.383	-23.287	-30.715	4.08698	1.20688	4.03353	3.6663	4.7941
23200	23174	436.027	-23.643	-30.913	4.06949	1.20172	4.01628	3.6536	4.7775
23300	23274	435.671	-23.999	-31.110	4.05207	1.19657	3.99908	3.6409	4.7609
23400	23374	435.315	-24.355	-31.308	4.03470	1.19145	3.98194	3.6283	4.7444
23500	23474	434.960	-24.710	-31.506	4.01740	1.18634	3.96487	3.6156	4.7279
23600	23573	434.604	-25.066	-31.703	4.00016	1.18125	3.94785	3.6031	4.7115
23700	23673	434.248	-25.422	-31.901	3.98298	1.17617	3.93089	3.5905	4.6951
23800	23773	433.892	-25.778	-32.099	3.96585	1.17112	3.91399	3.5780	4.6787
23900	23873	433.536	-26.134	-32.296	3.94879	1.16608	3.89715	3.5656	4.6624
24000	23972	433.181	-26.489	-32.494	3.93179 + 2	1.16106 + 1	3.88037 - 1	3.5531 - 2	4.6462 - 1
24100	24072	432.825	-26.845	-32.692	3.91484	1.15605	3.86365	3.5407	4.6300
24200	24172	432.469	-27.201	-32.889	3.89796	1.15107	3.84699	3.5284	4.6138
24300	24272	432.113	-27.557	-33.087	3.88113	1.14610	3.83038	3.5160	4.5976
24400	24371	431.757	-27.913	-33.285	3.86437	1.14115	3.81383	3.5037	4.5816
24500	24471	431.402	-28.268	-33.482	3.84766	1.13621	3.79735	3.4914	4.5655
24600	24571	431.046	-28.624	-33.680	3.83101	1.13130	3.78091	3.4792	4.5495
24700	24671	430.690	-28.980	-33.878	3.81442	1.12640	3.76454	3.4670	4.5336
24800	24771	430.334	-29.336	-34.075	3.79789	1.12152	3.74823	3.4548	4.5176
24900	24870	429.979	-29.691	-34.273	3.78142	1.11665	3.73197	3.4427	4.5018
25000	24970	429.623	-30.047	-34.471	3.76500 + 2	1.11180 + 1	3.71577 - 1	3.4306 - 2	4.4859 - 1
25100	25070	429.267	-30.403	-34.668	3.74864	1.10697	3.69962	3.4185	4.4701
25200	25170	428.911	-30.759	-34.866	3.73234	1.10216	3.68354	3.4065	4.4544
25300	25269	428.555	-31.115	-35.064	3.71610	1.09736	3.66751	3.3945	4.4387
25400	25369	428.200	-31.470	-35.261	3.69992	1.09259	3.65153	3.3825	4.4230
25500	25469	427.844	-31.826	-35.459	3.68379	1.08782	3.63562	3.3705	4.4074
25600	25569	427.488	-32.182	-35.657	3.66772	1.08308	3.61976	3.3586	4.3918
25700	25668	427.132	-32.538	-35.854	3.65171	1.07835	3.60395	3.3467	4.3763
25800	25768	426.777	-32.893	-36.052	3.63575	1.07364	3.58821	3.3349	4.3608
25900	25868	426.421	-33.249	-36.249	3.61985	1.06894	3.57251	3.3231	4.3454
26000	25968	426.065	-33.605	-36.447	3.60401 + 2	1.06426 + 1	3.55688 - 1	3.3113 - 2	4.3300 - 1
26100	26067	425.710	-33.960	-36.645	3.58822	1.05960	3.54130	3.2996	4.3146
26200	26167	425.354	-34.316	-36.842	3.57249	1.05496	3.52577	3.2878	4.2993
26300	26267	424.998	-34.672	-37.040	3.55681	1.05033	3.51030	3.2762	4.2840
26400	26367	424.642	-35.028	-37.238	3.54119	1.04571	3.49489	3.2645	4.2688
26500	26466	424.287	-35.383	-37.435	3.52563	1.04112	3.47953	3.2529	4.2536
26600	26566	423.931	-35.739	-37.633	3.51012	1.03654	3.46422	3.2413	4.2384
26700	26666	423.575	-36.095	-37.830	3.49467	1.03198	3.44897	3.2297	4.2233
26800	26766	423.220	-36.450	-38.028	3.47928	1.02743	3.43378	3.2182	4.2082
26900	26865	422.864	-36.806	-38.226	3.46393	1.02290	3.41864	3.2067	4.1932
27000	26965	422.508	-37.162	-38.423	3.44865 + 2	1.01838 + 1	3.40355 - 1	3.1952 - 2	4.1782 - 1
27100	27065	422.152	-37.518	-38.621	3.43341	1.01389	3.38852	3.1838	4.1632
27200	27165	421.797	-37.873	-38.818	3.41824	1.00941	3.37354	3.1724	4.1483
27300	27264	421.441	-38.229	-39.016	3.40311	1.00494	3.35861	3.1610	4.1335
27400	27364	421.085	-38.585	-39.214	3.38805	1.00049	3.34374	3.1497	4.1186
27500	27464	420.730	-38.940	-39.411	3.37303	9.96056 + 0	3.32892	3.1384	4.1039
27600	27564	420.374	-39.296	-39.609	3.35807	9.91638	3.31416	3.1271	4.0891
27700	27663	420.018	-39.652	-39.806	3.34317	9.87236	3.29945	3.1159	4.0744
27800	27763	419.663	-40.007	-40.004	3.32831	9.82850	3.28479	3.1047	4.0597
27900	27863	419.307	-40.363	-40.202	3.31351	9.78480	3.27018	3.0935	4.0451
28000	27962	418.951	-40.719	-40.399	3.29877 + 2	9.74126 + 0	3.25563 - 1	3.0823 - 2	4.0305 - 1
28100	28062	418.596	-41.074	-40.597	3.28408	9.69788	3.24113	3.0712	4.0160
28200	28162	418.240	-41.430	-40.794	3.26944	9.65465	3.22668	3.0601	4.0015
28300	28262	417.884	-41.786	-40.992	3.25485	9.61157	3.21229	3.0491	3.9870
28400	28361	417.529	-42.141	-41.190	3.24032	9.56866	3.19795	3.0380	3.9726
28500	28461	417.173	-42.497	-41.387	3.22584	9.52590	3.18366	3.0270	3.9582
28600	28561	416.818	-42.852	-41.585	3.21141	9.48329	3.16942	3.0161	3.9439
28700	28661	416.462	-43.208	-41.782	3.19704	9.44084	3.15523	3.0051	3.9296
28800	28760	416.106	-43.564	-41.980	3.18271	9.39855	3.14109	2.9942	3.9153
28900	28860	415.751	-43.919	-42.177	3.16844	9.35641	3.12701	2.9833	3.9011
29000	28960	415.395	-44.275	-42.375	3.15422 + 2	9.31442 + 0	3.11298 - 1	2.9725 - 2	3.8869 - 1
29100	29059	415.039	-44.631	-42.573	3.14006	9.27258	3.09899	2.9617	3.8728
29200	29159	414.684	-44.986	-42.770	3.12594	9.23090	3.08506	2.9509	3.8587
29300	29259	414.328	-45.342	-42.968	3.11188	9.18937	3.07118	2.9401	3.8446
29400	29359	413.972	-45.697	-43.165	3.09787	9.14799	3.05736	2.9294	3.8306
29500	29458	413.617	-46.053	-43.363	3.08390	9.10677	3.04358	2.9187	3.8166
29600	29558	413.261	-46.409	-43.560	3.06999	9.06569	3.02985	2.9081	3.8027
29700	29658	412.906	-46.764	-43.758	3.05614	9.02476	3.01617	2.8974	3.7888
29800	29757	412.550	-47.120	-43.956	3.04233	8.98399	3.00254	2.8868	3.7749
29900	29857	412.194	-47.476	-44.153	3.02857	8.94336	2.98897	2.8762	3.7611
30000	29957	411.839	-47.831	-44.351	3.01486 + 2	8.90289 + 0	2.97544 - 1	2.8657 - 2	3.7473 - 1
30100	30057	411.483	-48.187	-44.548	3.00121	8.86256	2.96196	2.8552	3.7335
30200	30156	411.128	-48.542	-44.746	2.98760	8.82238	2.94853	2.8447	3.7198
30300	30256	410.772	-48.898	-44.943	2.97404	8.78235	2.93515	2.8342	3.7061
30400	30356	410.417	-49.253	-45.141	2.96054	8.74247	2.92182	2.8238	3.6925
30500	30455	410.061	-49.609	-45.338	2.94708	8.70273	2.90854	2.8134	3.6789
30600	30555	409.705	-49.965	-45.536	2.93368	8.66314	2.89531	2.8030	3.6653
30700	30655	409.350	-50.320	-45.733	2.92032	8.62370	2.88213	2.7927	3.6518
30800	30755	408.994	-50.676	-45.931	2.90701	8.58440	2.86900	2.7824	3.6383
30900	30854	408.639	-51.031	-46.128	2.89375	8.54525	2.85591	2.7721	3.6249



TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
31000	31046	408.119	-51.551	-46.417	2.87446 + 2	8.48829 + 0	2.83687 - 1	2.7571 - 2	3.6053 - 1
31100	31146	407.762	-51.908	-46.615	2.86129	8.44938	2.82387	2.7469	3.5919
31200	31247	407.406	-52.264	-46.813	2.84816	8.41061	2.81091	2.7367	3.5786
31300	31347	407.049	-52.621	-47.012	2.83508	8.37199	2.79801	2.7265	3.5653
31400	31447	406.693	-52.977	-47.210	2.82205	8.33351	2.78515	2.7164	3.5520
31500	31548	406.336	-53.334	-47.408	2.80907	8.29517	2.77233	2.7062	3.5388
31600	31648	405.979	-53.691	-47.606	2.79613	8.25698	2.75957	2.6961	3.5256
31700	31748	405.623	-54.047	-47.804	2.78325	8.21893	2.74685	2.6861	3.5124
31800	31849	405.266	-54.404	-48.002	2.77041	8.18102	2.73418	2.6760	3.4993
31900	31949	404.909	-54.761	-48.200	2.75762	8.14326	2.72156	2.6660	3.4862
32000	32049	404.553	-55.117	-48.398	2.74488 + 2	8.10563 + 0	2.70899 - 1	2.6561 - 2	3.4731 - 1
32100	32149	404.196	-55.474	-48.597	2.73219	8.06815	2.69646	2.6461	3.4601
32200	32250	403.840	-55.830	-48.795	2.71954	8.03081	2.68398	2.6362	3.4472
32300	32350	403.483	-56.187	-48.993	2.70694	7.99360	2.67155	2.6263	3.4342
32400	32450	403.126	-56.544	-49.191	2.69439	7.95654	2.65916	2.6164	3.4213
32500	32551	402.770	-56.900	-49.389	2.68189	7.91961	2.64682	2.6066	3.4085
32600	32651	402.413	-57.257	-49.587	2.66943	7.88283	2.63452	2.5968	3.3956
32700	32751	402.057	-57.613	-49.785	2.65702	7.84618	2.62228	2.5870	3.3828
32800	32852	401.700	-57.970	-49.983	2.64466	7.80967	2.61008	2.5773	3.3701
32900	32952	401.343	-58.327	-50.181	2.63234	7.77330	2.59792	2.5675	3.3574
33000	33052	400.987	-58.683	-50.380	2.62007 + 2	7.73707 + 0	2.58581 - 1	2.5578 - 2	3.3447 - 1
33100	33153	400.630	-59.040	-50.578	2.60785	7.70097	2.57375	2.5482	3.3321
33200	33253	400.273	-59.397	-50.776	2.59567	7.66501	2.56173	2.5385	3.3195
33300	33353	399.917	-59.753	-50.974	2.58354	7.62919	2.54975	2.5289	3.3069
33400	33454	399.560	-60.110	-51.172	2.57145	7.59350	2.53783	2.5193	3.2944
33500	33554	399.204	-60.466	-51.370	2.55941	7.55794	2.52594	2.5098	3.2819
33600	33654	398.847	-60.823	-51.568	2.54742	7.52253	2.51411	2.5003	3.2694
33700	33755	398.490	-61.180	-51.766	2.53547	7.48724	2.50232	2.4908	3.2570
33800	33855	398.134	-61.536	-51.965	2.52357	7.45209	2.49057	2.4813	3.2446
33900	33955	397.777	-61.893	-52.163	2.51171	7.41708	2.47887	2.4718	3.2322
34000	34056	397.421	-62.249	-52.361	2.49990 + 2	7.38219 + 0	2.46721 - 1	2.4624 - 2	3.2199 - 1
34100	34156	397.064	-62.606	-52.559	2.48813	7.34744	2.45559	2.4530	3.2077
34200	34256	396.707	-62.963	-52.757	2.47641	7.31283	2.44402	2.4437	3.1954
34300	34357	396.351	-63.319	-52.955	2.46473	7.27834	2.43250	2.4343	3.1832
34400	34457	395.994	-63.676	-53.153	2.45310	7.24399	2.42102	2.4250	3.1710
34500	34557	395.637	-64.033	-53.351	2.44151	7.20977	2.40958	2.4157	3.1589
34600	34658	395.281	-64.389	-53.550	2.42996	7.17568	2.39819	2.4065	3.1468
34700	34758	394.924	-64.746	-53.748	2.41846	7.14172	2.38684	2.3973	3.1347
34800	34858	394.568	-65.102	-53.946	2.40701	7.10789	2.37553	2.3881	3.1227
34900	34959	394.211	-65.459	-54.144	2.39559	7.07419	2.36427	2.3789	3.1107
35000	35059	393.854	-65.816	-54.342	2.38423 + 2	7.04062 + 0	2.35305 - 1	2.3697 - 2	3.0987 - 1
35100	35160	393.497	-66.173	-54.540	2.37286	6.97386	2.34074	2.3515	3.0749
35200	35260	393.141	-66.529	-54.738	2.36162	6.90762	2.32860	2.3334	3.0513
35300	35361	392.784	-66.886	-54.936	2.35039	6.84189	2.31663	2.3154	3.0277
35400	35461	392.428	-67.242	-55.134	2.33919	6.77667	2.30483	2.2975	3.0043
35500	35561	392.071	-67.599	-55.332	2.32793	6.71195	2.29320	2.2798	2.9811
35600	35662	391.715	-67.955	-55.530	2.31669	6.64775	2.28175	2.2598	2.9550
35700	35762	391.358	-68.312	-55.728	2.30546	6.58415	2.27049	2.2382	2.9267
35800	35863	391.001	-68.669	-55.926	2.29423	6.52116	2.25944	2.2168	2.8987
35900	35963	390.644	-69.026	-56.124	2.28300	6.45878	2.24859	2.1956	2.8710
36000	36064	390.287	-69.383	-56.322	2.27177				
36100	36164	389.930	-69.740	-56.520	2.26054				
36200	36265	389.573	-70.097	-56.718	2.24931				
36300	36365	389.216	-70.454	-56.916	2.23808				
36400	36466	388.859	-70.811	-57.114	2.22685				
36500	36566	388.502	-71.168	-57.312	2.21562				
36600	36667	388.145	-71.525	-57.510	2.20439				
36700	36767	387.788	-71.882	-57.708	2.19316				
36800	36868	387.431	-72.239	-57.906	2.18193				
36900	36968	387.074	-72.596	-58.104	2.17070				
37000	37068	386.717	-72.953	-58.302	2.15947				
37100	37169	386.360	-73.310	-58.500	2.14824				
37200	37269	386.003	-73.667	-58.698	2.13701				
37300	37370	385.646	-74.024	-58.896	2.12578				
37400	37470	385.289	-74.381	-59.094	2.11455				
37500	37571	384.932	-74.738	-59.292	2.10332				
37600	37671	384.575	-75.095	-59.490	2.09209				
37700	37772	384.218	-75.452	-59.688	2.08086				
37800	37872	383.861	-75.809	-59.886	2.06963				
37900	37973	383.504	-76.166	-59.984	2.05840				
38000	38073	383.147	-76.523	-60.182	2.04717				
38100	38174	382.790	-76.880	-60.380	2.03594				
38200	38274	382.433	-77.237	-60.578	2.02471				
38300	38375	382.076	-77.594	-60.776	2.01348				
38400	38475	381.719	-77.951	-60.974	2.00225				
38500	38576	381.362	-78.308	-61.172	1.99102				
38600	38676	381.005	-78.665	-61.370	1.97979				
38700	38777	380.648	-79.022	-61.568	1.96856				
38800	38877	380.291	-79.379	-61.766	1.95733				
38900	38978	379.934	-79.736	-61.964	1.94610				
39000	39078	379.577	-80.093	-62.162	1.93487				
39100	39179	379.220	-80.450	-62.360	1.92364				
39200	39279	378.863	-80.807	-62.558	1.91241				
39300	39380	378.506	-81.164	-62.756	1.90118				
39400	39480	378.149	-81.521	-62.954	1.88995				
39500	39581	377.792	-81.878	-63.152	1.87872				
39600	39681	377.435	-82.235	-63.350	1.86749				
39700	39782	377.078	-82.592	-63.548	1.85626				
39800	39882	376.721	-82.949	-63.746	1.84503				
39900	39983	376.364	-83.306	-63.944	1.83380				
40000	40083	376.007	-83.663	-64.142	1.82257				
40100	40184	375.650	-84.020	-64.340	1.81134				
40200	40284	375.293	-84.377	-64.538	1.80011				
40300	40385	374.936	-84.734	-64.736	1.78888				
40400	40485	374.579	-85.091	-64.934	1.77765				
40500	40586	374.222	-85.448	-65.132	1.76642				
40600	40686	373.865	-85.805	-65.330	1.75519				
40700	40787	373.508	-86.162	-65.528	1.74396				
40800	40887	373.151	-86.519	-65.726	1.73273				
40900	40988	372.794	-86.876	-65.924	1.72150				
41000	41088	372.437	-87.233	-66.122	1.71027				
41100	41189	372.080	-87.590	-66.320	1.69904				
41200	41289	371.723	-87.947	-66.518	1.68781				
41300	41390	371.366	-88.304	-66.716	1.67658				
41400	41490	371.009	-88.661	-66.914	1.66535				
41500	41591	370.652	-89.018	-67.112	1.65412				
41600	41691	370.295	-89.375	-67.310	1.64289				
41700	41792	369.938	-89.732	-67.508	1.63166				
41800	41892	369.581	-90.089	-67.706	1.62043				
41900	41993	369.224	-90.446	-67.904	1.60920				
42000	42093	368.867	-90.803	-68.102	1.59797				
42100	42194	368.510	-91.160	-68.300	1.58674				
42200	42294	368.153	-91.517	-68.498	1.57551				
42300	42395	367.796	-91.874	-68.696	1.56428				
42400	42495	367.439	-92.231	-68.894	1.55305				
42500	42596	367.082	-92.588	-69.092	1.54182				
42600	42696	366.725	-92.945	-69.290	1.53059				
42700	42797	366.368	-93.302	-69.488	1.51936				
42800	42897	366.011	-93.659	-69.686	1.50813				

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
31000	30954	408.283	-51.387	-46.326	2.88054 + 2	8.50624 + 0	2.84288 - 1	2.7619 - 2	3.6115 - 1
31100	31054	407.928	-51.742	-46.524	2.86738	8.46738	2.82989	2.7516	3.5981
31200	31153	407.572	-52.098	-46.721	2.85427	8.42866	2.81695	2.7415	3.5848
31300	31253	407.216	-52.454	-46.919	2.84121	8.39009	2.80406	2.7313	3.5715
31400	31353	406.861	-52.809	-47.116	2.82820	8.35166	2.79121	2.7212	3.5583
31500	31452	406.505	-53.165	-47.314	2.81523	8.31337	2.77842	2.7110	3.5450
31600	31552	406.150	-53.520	-47.511	2.80231	8.27522	2.76567	2.7010	3.5319
31700	31652	405.794	-53.876	-47.709	2.78944	8.23722	2.75297	2.6909	3.5187
31800	31752	405.439	-54.231	-47.906	2.77662	8.19936	2.74031	2.6809	3.5056
31900	31851	405.083	-54.587	-48.104	2.76385	8.16164	2.72771	2.6709	3.4926
32000	31951	404.728	-54.942	-48.301	2.75112 + 2	8.12406 + 0	2.71515 - 1	2.6610 - 2	3.4795 - 1
32100	32051	404.372	-55.298	-48.499	2.73845	8.08663	2.70264	2.6510	3.4665
32200	32150	404.017	-55.653	-48.696	2.72581	8.04933	2.69017	2.6411	3.4536
32300	32250	403.661	-56.009	-48.894	2.71323	8.01217	2.67775	2.6312	3.4407
32400	32350	403.306	-56.364	-49.091	2.70070	7.97515	2.66538	2.6214	3.4278
32500	32449	402.950	-56.720	-49.289	2.68821	7.93827	2.65305	2.6116	3.4150
32600	32549	402.595	-57.075	-49.486	2.67576	7.90153	2.64077	2.6018	3.4022
32700	32649	402.239	-57.431	-49.684	2.66337	7.86493	2.62854	2.5920	3.3894
32800	32748	401.884	-57.786	-49.881	2.65102	7.82846	2.61635	2.5823	3.3767
32900	32848	401.528	-58.142	-50.079	2.63872	7.79213	2.60421	2.5726	3.3640
33000	32948	401.173	-58.497	-50.276	2.62646 + 2	7.75594 + 0	2.59212 - 1	2.5629 - 2	3.3513 - 1
33100	33048	400.817	-58.853	-50.474	2.61425	7.71989	2.58007	2.5532	3.3387
33200	33147	400.462	-59.208	-50.671	2.60209	7.68397	2.56806	2.5436	3.3261
33300	33247	400.106	-59.564	-50.869	2.58997	7.64819	2.55611	2.5340	3.3136
33400	33347	399.751	-59.919	-51.066	2.57790	7.61254	2.54419	2.5245	3.3010
33500	33446	399.395	-60.275	-51.264	2.56588	7.57703	2.53232	2.5149	3.2886
33600	33546	399.040	-60.630	-51.461	2.55390	7.54165	2.52050	2.5054	3.2761
33700	33646	398.684	-60.986	-51.659	2.54196	7.50641	2.50872	2.4959	3.2637
33800	33745	398.329	-61.341	-51.856	2.53007	7.47130	2.49699	2.4865	3.2514
33900	33845	397.973	-61.697	-52.054	2.51823	7.43633	2.48530	2.4770	3.2390
34000	33945	397.618	-62.052	-52.251	2.50643 + 2	7.40148 + 0	2.47365 - 1	2.4676 - 2	3.2267 - 1
34100	34044	397.262	-62.408	-52.449	2.49468	7.36677	2.46205	2.4583	3.2145
34200	34144	396.907	-62.763	-52.646	2.48297	7.33220	2.45050	2.4489	3.2023
34300	34244	396.552	-63.118	-52.844	2.47130	7.29775	2.43898	2.4396	3.1901
34400	34343	396.196	-63.474	-53.041	2.45968	7.26343	2.42752	2.4303	3.1779
34500	34443	395.841	-63.829	-53.239	2.44811	7.22925	2.41609	2.4210	3.1658
34600	34543	395.485	-64.185	-53.436	2.43657	7.19520	2.40471	2.4118	3.1537
34700	34642	395.130	-64.540	-53.633	2.42509	7.16128	2.39337	2.4026	3.1417
34800	34742	394.774	-64.896	-53.831	2.41364	7.12748	2.38208	2.3934	3.1297
34900	34842	394.419	-65.251	-54.028	2.40224	7.09382	2.37083	2.3842	3.1177
35000	34941	394.064	-65.606	-54.226	2.39089 + 2	7.06029 + 0	2.35962 - 1	2.3751 - 2	3.1058 - 1
35100	35041	393.709	-65.961	-54.424	2.37931	6.99361	2.33734	2.3569	3.0820
35200	35141	393.353	-66.317	-54.621	2.36831	6.92744	2.31522	2.3389	3.0584
35300	35241	393.000	-66.672	-54.818	2.35731	6.86178	2.29328	2.3209	3.0349
35400	35341	392.646	-67.028	-55.016	2.34631	6.79662	2.27150	2.3030	3.0115
35500	35441	392.292	-67.383	-55.214	2.33531	6.73197	2.24990	2.2853	2.9883
35600	35541	391.938	-67.739	-55.412	2.32431	6.66782	2.22846	2.2666	2.9639
35700	35641	391.584	-68.095	-55.610	2.31331	6.60425	2.20721	2.2450	2.9356
35800	35741	391.230	-68.451	-55.808	2.30231	6.54129	2.18617	2.2236	2.9077
35900	35841	390.876	-68.807	-56.006	2.29131	6.47893	2.16533	2.2024	2.8799
36000	35941	390.522	-69.163	-56.204	2.28031	6.41717 + 0	2.14469 - 1	2.1814 - 2	2.8525 - 1
36100	36041	390.168	-69.519	-56.402	2.26931	6.35600	2.12424	2.1606	2.8253
36200	36141	389.814	-69.875	-56.600	2.25831	6.29541	2.10399	2.1400	2.7984
36300	36241	389.460	-70.231	-56.798	2.24731	6.23540	2.08394	2.1196	2.7717
36400	36341	389.106	-70.587	-56.996	2.23631	6.17596	2.06407	2.0994	2.7453
36500	36441	388.752	-70.943	-57.194	2.22531	6.11709	2.04440	2.0794	2.7191
36600	36541	388.398	-71.299	-57.392	2.21431	6.05878	2.02491	2.0596	2.6932
36700	36641	388.044	-71.655	-57.590	2.20331	6.00103	2.00561	2.0400	2.6675
36800	36741	387.690	-72.011	-57.788	2.19231	5.94383	1.98649	2.0205	2.6421
36900	36841	387.336	-72.367	-57.986	2.18131	5.88718	1.96756	2.0013	2.6169
37000	36941	386.982	-72.723	-58.184	2.17031	5.83107 + 0	1.94880 - 1	1.9822 - 2	2.5920 - 1
37100	37041	386.628	-73.079	-58.382	2.15931	5.77549	1.93023	1.9633	2.5673
37200	37141	386.274	-73.435	-58.580	2.14831	5.72044	1.91183	1.9446	2.5428
37300	37241	385.920	-73.791	-58.778	2.13731	5.66592	1.89361	1.9260	2.5186
37400	37341	385.566	-74.147	-58.976	2.12631	5.61193	1.87556	1.9077	2.4945
37500	37441	385.212	-74.503	-59.174	2.11531	5.55844	1.85769	1.8895	2.4708
37600	37541	384.858	-74.859	-59.372	2.10431	5.50547	1.83999	1.8715	2.4472
37700	37641	384.504	-75.215	-59.570	2.09331	5.45300	1.82245	1.8537	2.4239
37800	37741	384.150	-75.571	-59.768	2.08231	5.40104	1.80508	1.8360	2.4008
37900	37841	383.796	-75.927	-59.966	2.07131	5.34957	1.78788	1.8185	2.3779
38000	37941	383.442	-76.283	-60.164	2.06031	5.29859 + 0	1.77084 - 1	1.8012 - 2	2.3553 - 1
38100	38041	383.088	-76.639	-60.362	2.04931	5.24810	1.75397	1.7840	2.3328
38200	38141	382.734	-76.995	-60.560	2.03831	5.19809	1.73726	1.7670	2.3106
38300	38241	382.380	-77.351	-60.758	2.02731	5.14856	1.72070	1.7502	2.2886
38400	38341	382.026	-77.707	-60.956	2.01631	5.09950	1.70431	1.7335	2.2668
38500	38441	381.672	-78.063	-61.154	2.00531	5.05091	1.68807	1.7170	2.2452
38600	38541	381.318	-78.419	-61.352	1.99431	5.00278	1.67198	1.7006	2.2238
38700	38641	380.964	-78.775	-61.550	1.98331	4.95511	1.65605	1.6844	2.2026
38800	38741	380.610	-79.131	-61.748	1.97231	4.90790	1.64027	1.6684	2.1816
38900	38841	380.256	-79.487	-61.946	1.96131	4.86114	1.62464	1.6525	2.1608
39000	38941	379.902	-79.843	-62.144	1.95031				
39100	39041	379.548	-80.200	-62.342	1.93931				
39200	39141	379.194	-80.556	-62.540	1.92831				
39300	39241	378.840	-80.912	-62.738	1.91731				
39400	39341	378.486	-81.268	-62.936	1.90631				
39500	39441	378.132	-81.624	-63.134	1.89531				
39600	39541	377.778	-81.980	-63.332	1.88431				
39700	39641	377.424	-82.336	-63.530	1.87331				
39800	39741	377.070	-82.692	-63.728	1.86231				
39900	39841	376.716	-83.048	-63.926	1.85131				
40000	39941	376.362	-83.404	-64.124	1.84031				
40100	40041	376.008	-83.760	-64.322	1.82931				
40200	40141	375.654	-84.116	-64.520	1.81831				
40300	40241	375.300	-84.472	-64.718	1.80731				
40400	40341	374.946	-84.828	-64.916	1.79631				
40500	40441	374.592	-85.184	-65.114	1.78531				
40600	40541	374.238	-85.540	-65.312	1.77431				
40700	40641	373.884	-85.896	-65.510	1.76331				
40800	40741	373.530	-86.252	-65.708	1.75231				
40900	40841	373.176	-86.608	-65.906	1.74131				
41000	40941	372.822	-86.964	-66.104	1.73031				
41100	41041	372.468	-87.320	-66.302	1.71931				
41200	41141	372.114	-87.676	-66.500	1.70831				
41300	41241	371.760	-88.032	-66.698	1.69731				
41400	41341	371.406	-88.388	-66.896	1.68631				
41500	41441	371.052	-88.744	-67.094	1.67531				
41600	41541	370.698	-89.100	-67.292	1.66431				
41700	41641	370.344	-89.456	-67.490	1.65331				
41800	41741	370.000	-89.812	-67.688	1.64231				
41900	41841	369.646	-90						

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
43000	43089	389.970	-69.700	-56.500	1.62357 + 2	4.79439 + 0	1.60234 - 1	1.6298 - 2	2.1311 - 1
43200	43290	389.970	-69.700	-56.500	1.60803	4.74852	1.58701	1.6142	2.1108
43400	43491	389.970	-69.700	-56.500	1.59265	4.70310	1.57182	1.5987	2.0906
43600	43691	389.970	-69.700	-56.500	1.57741	4.65810	1.55679	1.5835	2.0706
43800	43892	389.970	-69.700	-56.500	1.56232	4.61354	1.54189	1.5683	2.0508
44000	44093	389.970	-69.700	-56.500	1.54738	4.56941	1.52714	1.5533	2.0311
44200	44294	389.970	-69.700	-56.500	1.53257	4.52569	1.51253	1.5384	2.0117
44400	44495	389.970	-69.700	-56.500	1.51791	4.48240	1.49806	1.5237	1.9925
44600	44696	389.970	-69.700	-56.500	1.50339	4.43951	1.48373	1.5091	1.9734
44800	44896	389.970	-69.700	-56.500	1.48901	4.39704	1.46954	1.4947	1.9545
45000	45097	389.970	-69.700	-56.500	1.47476 + 2	4.35498 + 0	1.45548 - 1	1.4804 - 2	1.9358 - 1
45200	45298	389.970	-69.700	-56.500	1.46066	4.31332	1.44156	1.4662	1.9173
45400	45499	389.970	-69.700	-56.500	1.44668	4.27205	1.42776	1.4522	1.8990
45600	45700	389.970	-69.700	-56.500	1.43284	4.23118	1.41411	1.4383	1.8808
45800	45901	389.970	-69.700	-56.500	1.41914	4.19070	1.40058	1.4246	1.8628
46000	46102	389.970	-69.700	-56.500	1.40556	4.15061	1.38718	1.4109	1.8450
46200	46303	389.970	-69.700	-56.500	1.39211	4.11091	1.37391	1.3974	1.8273
46400	46503	389.970	-69.700	-56.500	1.37879	4.07158	1.36076	1.3841	1.8099
46600	46704	389.970	-69.700	-56.500	1.36560	4.03263	1.34775	1.3708	1.7925
46800	46905	389.970	-69.700	-56.500	1.35254	3.99405	1.33485	1.3577	1.7754
47000	47106	389.970	-69.700	-56.500	1.33960 + 2	3.95584 + 0	1.32208 - 1	1.3447 - 2	1.7584 - 1
47200	47307	389.970	-69.700	-56.500	1.32679	3.91800	1.30944	1.3319	1.7416
47400	47508	389.970	-69.700	-56.500	1.31409	3.88051	1.29691	1.3191	1.7249
47600	47709	389.970	-69.700	-56.500	1.30152	3.84339	1.28450	1.3065	1.7084
47800	47910	389.970	-69.700	-56.500	1.28907	3.80662	1.27221	1.2940	1.6921
48000	48111	389.970	-69.700	-56.500	1.27674	3.77020	1.26004	1.2816	1.6759
48200	48312	389.970	-69.700	-56.500	1.26452	3.73414	1.24799	1.2694	1.6599
48400	48513	389.970	-69.700	-56.500	1.25243	3.69841	1.23605	1.2572	1.6440
48600	48714	389.970	-69.700	-56.500	1.24044	3.66303	1.22422	1.2452	1.6282
48800	48914	389.970	-69.700	-56.500	1.22858	3.62799	1.21251	1.2333	1.6127
49000	49115	389.970	-69.700	-56.500	1.21682 + 2	3.59328 + 0	1.20091 - 1	1.2215 - 2	1.5972 - 1
49200	49316	389.970	-69.700	-56.500	1.20518	3.55891	1.18942	1.2098	1.5820
49400	49517	389.970	-69.700	-56.500	1.19365	3.52486	1.17805	1.1982	1.5668
49600	49718	389.970	-69.700	-56.500	1.18223	3.49114	1.16678	1.1868	1.5518
49800	49919	389.970	-69.700	-56.500	1.17092	3.45774	1.15561	1.1754	1.5370
50000	50120	389.970	-69.700	-56.500	1.15972	3.42466	1.14456	1.1642	1.5223
50200	50321	389.970	-69.700	-56.500	1.14863	3.39190	1.13361	1.1530	1.5077
50400	50522	389.970	-69.700	-56.500	1.13764	3.35945	1.12276	1.1420	1.4933
50600	50723	389.970	-69.700	-56.500	1.12676	3.32731	1.11202	1.1311	1.4790
50800	50924	389.970	-69.700	-56.500	1.11598	3.29548	1.10138	1.1202	1.4649
51000	51125	389.970	-69.700	-56.500	1.10530 + 2	3.26395 + 0	1.09085 - 1	1.1095 - 2	1.4509 - 1
51200	51326	389.970	-69.700	-56.500	1.09473	3.23273	1.08041	1.0989	1.4370
51400	51527	389.970	-69.700	-56.500	1.08425	3.20180	1.07008	1.0884	1.4232
51600	51728	389.970	-69.700	-56.500	1.07388	3.17117	1.05984	1.0780	1.4096
51800	51929	389.970	-69.700	-56.500	1.06361	3.14083	1.04970	1.0677	1.3961
52000	52130	389.970	-69.700	-56.500	1.05343	3.11079	1.03966	1.0575	1.3828
52200	52331	389.970	-69.700	-56.500	1.04336	3.08103	1.02971	1.0473	1.3695
52400	52532	389.970	-69.700	-56.500	1.03337	3.05155	1.01986	1.0373	1.3564
52600	52733	389.970	-69.700	-56.500	1.02349	3.02236	1.01010	1.0274	1.3435
52800	52934	389.970	-69.700	-56.500	1.01370	2.99344	1.00044	1.0176	1.3306
53000	53135	389.970	-69.700	-56.500	1.00400 + 2	2.96481 + 0	9.90870 - 2	1.0078 - 2	1.3179 - 1
53200	53336	389.970	-69.700	-56.500	9.94394 + 1	2.93644	9.81390	9.9820 - 3	1.3053
53400	53537	389.970	-69.700	-56.500	9.94881	2.90835	9.72002	9.8865	1.2928
53600	53738	389.970	-69.700	-56.500	9.97549	2.88053	9.62703	9.7919	1.2804
53800	53939	389.970	-69.700	-56.500	9.966127	2.85297	9.53493	9.6982	1.2682
54000	54140	389.970	-69.700	-56.500	9.96884	2.82568	9.44371	9.6055	1.2560
54200	54341	389.970	-69.700	-56.500	9.97730	2.79865	9.35337	9.5136	1.2440
54400	54542	389.970	-69.700	-56.500	9.98664	2.77187	9.26389	9.4226	1.2321
54600	54743	389.970	-69.700	-56.500	9.99684	2.74535	9.17526	9.3324	1.2203
54800	54944	389.970	-69.700	-56.500	9.20790	2.71909	9.08749	9.2431	1.2087
55000	55145	389.970	-69.700	-56.500	9.11981 + 1	2.69308 + 0	9.00055 - 2	9.1547 - 3	1.1971 - 1
55200	55347	389.970	-69.700	-56.500	9.03256	2.66731	8.91445	9.0671	1.1856
55400	55548	389.970	-69.700	-56.500	8.94615	2.64180	8.82917	8.9804	1.1743
55600	55749	389.970	-69.700	-56.500	8.86057	2.61652	8.74470	8.8945	1.1631
55800	55950	389.970	-69.700	-56.500	8.77580	2.59149	8.66104	8.8094	1.1519
56000	56151	389.970	-69.700	-56.500	8.69185	2.56670	8.57819	8.7251	1.1409
56200	56352	389.970	-69.700	-56.500	8.60869	2.54215	8.49612	8.6416	1.1300
56400	56553	389.970	-69.700	-56.500	8.52634	2.51783	8.41484	8.5590	1.1192
56600	56754	389.970	-69.700	-56.500	8.44477	2.49374	8.33434	8.4771	1.1085
56800	56955	389.970	-69.700	-56.500	8.36398	2.46988	8.25461	8.3960	1.0979
57000	57156	389.970	-69.700	-56.500	8.28397 + 1	2.44625 + 0	8.17564 - 2	8.3157 - 3	1.0874 - 1
57200	57357	389.970	-69.700	-56.500	8.20472	2.42285	8.09743	8.2361	1.0770
57400	57558	389.970	-69.700	-56.500	8.12622	2.39967	8.01996	8.1573	1.0667
57600	57760	389.970	-69.700	-56.500	8.04848	2.37672	7.94324	8.0793	1.0565
57800	57961	389.970	-69.700	-56.500	7.97149	2.35398	7.86725	8.0020	1.0464
58000	58162	389.970	-69.700	-56.500	7.89523	2.33146	7.79198	7.9254	1.0364
58200	58363	389.970	-69.700	-56.500	7.81970	2.30916	7.71744	7.8496	1.0264
58400	58564	389.970	-69.700	-56.500	7.74489	2.28706	7.64361	7.7745	1.0166
58600	58765	389.970	-69.700	-56.500	7.67080	2.26519	7.57049	7.7001	1.0069
58800	58966	389.970	-69.700	-56.500	7.59741	2.24351	7.49806	7.6265	9.9726 - 2

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
43000	42912	389.970	-69.700	-56.500	1.63049 + 2	4.81482 + 0	1.60917 - 1	1.6367 - 2	2.1402 - 1
43200	43111	389.970	-69.700	-56.500	1.61495	4.76895	1.59383	1.6211	2.1198
43400	43310	389.970	-69.700	-56.500	1.59957	4.72352	1.57865	1.6057	2.0996
43600	43509	389.970	-69.700	-56.500	1.58433	4.67852	1.56361	1.5904	2.0796
43800	43708	389.970	-69.700	-56.500	1.56923	4.63394	1.54871	1.5752	2.0598
44000	43907	389.970	-69.700	-56.500	1.55428	4.58980	1.53396	1.5602	2.0402
44200	44107	389.970	-69.700	-56.500	1.53948	4.54607	1.51935	1.5454	2.0208
44400	44306	389.970	-69.700	-56.500	1.52481	4.50277	1.50487	1.5306	2.0015
44600	44505	389.970	-69.700	-56.500	1.51029	4.45987	1.49054	1.5161	1.9825
44800	44704	389.970	-69.700	-56.500	1.49590	4.41739	1.47634	1.5016	1.9636
45000	44903	389.970	-69.700	-56.500	1.48165 + 2	4.37531 + 0	1.46227 - 1	1.4873 - 2	1.9449 - 1
45200	45102	389.970	-69.700	-56.500	1.46754	4.33363	1.44835	1.4732	1.9263
45400	45301	389.970	-69.700	-56.500	1.45356	4.29235	1.43455	1.4591	1.9080
45600	45501	389.970	-69.700	-56.500	1.43971	4.25147	1.42088	1.4452	1.8898
45800	45700	389.970	-69.700	-56.500	1.42600	4.21097	1.40735	1.4315	1.8718
46000	45899	389.970	-69.700	-56.500	1.41242	4.17086	1.39395	1.4178	1.8540
46200	46098	389.970	-69.700	-56.500	1.39896	4.13114	1.38067	1.4043	1.8363
46400	46297	389.970	-69.700	-56.500	1.38564	4.09179	1.36752	1.3909	1.8188
46600	46496	389.970	-69.700	-56.500	1.37244	4.05282	1.35449	1.3777	1.8015
46800	46695	389.970	-69.700	-56.500	1.35937	4.01422	1.34159	1.3646	1.7844
47000	46894	389.970	-69.700	-56.500	1.34642 + 2	3.97599 + 0	1.32882 - 1	1.3516 - 2	1.7674 - 1
47200	47093	389.970	-69.700	-56.500	1.33360	3.93812	1.31616	1.3387	1.7505
47400	47293	389.970	-69.700	-56.500	1.32090	3.90061	1.30363	1.3260	1.7339
47600	47492	389.970	-69.700	-56.500	1.30832	3.86347	1.29121	1.3133	1.7173
47800	47691	389.970	-69.700	-56.500	1.29586	3.82667	1.27891	1.3008	1.7010
48000	47890	389.970	-69.700	-56.500	1.28352	3.79023	1.26674	1.2884	1.6848
48200	48089	389.970	-69.700	-56.500	1.27130	3.75414	1.25467	1.2762	1.6687
48400	48288	389.970	-69.700	-56.500	1.25919	3.71839	1.24272	1.2640	1.6529
48600	48487	389.970	-69.700	-56.500	1.24720	3.68298	1.23089	1.2520	1.6371
48800	48686	389.970	-69.700	-56.500	1.23532	3.64791	1.21917	1.2401	1.6215
49000	48885	389.970	-69.700	-56.500	1.22356 + 2	3.61317 + 0	1.20756 - 1	1.2282 - 2	1.6061 - 1
49200	49084	389.970	-69.700	-56.500	1.21191	3.57877	1.19606	1.2165	1.5908
49400	49283	389.970	-69.700	-56.500	1.20037	3.54469	1.18467	1.2050	1.5756
49600	49482	389.970	-69.700	-56.500	1.18894	3.51094	1.17339	1.1935	1.5606
49800	49681	389.970	-69.700	-56.500	1.17762	3.47751	1.16222	1.1821	1.5458
50000	49880	389.970	-69.700	-56.500	1.16641	3.44440	1.15116	1.1709	1.5311
50200	50079	389.970	-69.700	-56.500	1.15530	3.41161	1.14020	1.1597	1.5165
50400	50278	389.970	-69.700	-56.500	1.14430	3.37913	1.12934	1.1487	1.5021
50600	50478	389.970	-69.700	-56.500	1.13341	3.34696	1.11859	1.1377	1.4878
50800	50677	389.970	-69.700	-56.500	1.12262	3.31509	1.10794	1.1269	1.4736
51000	50876	389.970	-69.700	-56.500	1.11193 + 2	3.28353 + 0	1.09739 - 1	1.1162 - 2	1.4596 - 1
51200	51075	389.970	-69.700	-56.500	1.10135	3.25227	1.08694	1.1056	1.4457
51400	51274	389.970	-69.700	-56.500	1.09086	3.22131	1.07660	1.0950	1.4319
51600	51473	389.970	-69.700	-56.500	1.08048	3.19064	1.06635	1.0846	1.4183
51800	51672	389.970	-69.700	-56.500	1.07019	3.16027	1.05620	1.0743	1.4048
52000	51871	389.970	-69.700	-56.500	1.06000	3.13019	1.04614	1.0641	1.3914
52200	52070	389.970	-69.700	-56.500	1.04991	3.10039	1.03618	1.0539	1.3781
52400	52269	389.970	-69.700	-56.500	1.03992	3.07088	1.02632	1.0439	1.3650
52600	52468	389.970	-69.700	-56.500	1.03002	3.04164	1.01655	1.0340	1.3520
52800	52667	389.970	-69.700	-56.500	1.02021	3.01269	1.00687	1.0241	1.3392
53000	52866	389.970	-69.700	-56.500	1.01050 + 2	2.98402 + 0	9.97289 - 2	1.0144 - 2	1.3264 - 1
53200	53065	389.970	-69.700	-56.500	1.00089	2.95561	9.87797	1.0047	1.3138
53400	53264	389.970	-69.700	-56.500	9.91359 + 1	2.92748	9.78395	9.9515 - 3	1.3013
53600	53463	389.970	-69.700	-56.500	9.81923	2.89962	9.69082	9.8568	1.2889
53800	53662	389.970	-69.700	-56.500	9.72577	2.87202	9.59859	9.7630	1.2766
54000	53861	389.970	-69.700	-56.500	9.63321	2.84468	9.50723	9.6701	1.2645
54200	54059	389.970	-69.700	-56.500	9.54152	2.81761	9.41675	9.5780	1.2525
54400	54258	389.970	-69.700	-56.500	9.45071	2.79079	9.32713	9.4869	1.2405
54600	54457	389.970	-69.700	-56.500	9.36077	2.76423	9.23836	9.3966	1.2287
54800	54656	389.970	-69.700	-56.500	9.27168	2.73793	9.15044	9.3072	1.2170
55000	54855	389.970	-69.700	-56.500	9.18345 + 1	2.71187 + 0	9.06336 - 2	9.2186 - 3	1.2055 - 1
55200	55054	389.970	-69.700	-56.500	9.09605	2.68606	8.97711	9.1309	1.1940
55400	55253	389.970	-69.700	-56.500	9.00949	2.66050	8.89168	9.0440	1.1826
55600	55452	389.970	-69.700	-56.500	8.92376	2.63518	8.80706	8.9579	1.1714
55800	55651	389.970	-69.700	-56.500	8.83884	2.61011	8.72326	8.8727	1.1602
56000	55850	389.970	-69.700	-56.500	8.75473	2.58527	8.64025	8.7882	1.1492
56200	56049	389.970	-69.700	-56.500	8.67142	2.56067	8.55803	8.7046	1.1382
56400	56248	389.970	-69.700	-56.500	8.58891	2.53630	8.47660	8.6218	1.1274
56600	56447	389.970	-69.700	-56.500	8.50719	2.51217	8.39594	8.5397	1.1167
56800	56646	389.970	-69.700	-56.500	8.42624	2.48827	8.31605	8.4585	1.1061
57000	56845	389.970	-69.700	-56.500	8.34606 + 1	2.46459 + 0	8.23693 - 2	8.3780 - 3	1.0955 - 1
57200	57044	389.970	-69.700	-56.500	8.26665	2.44114	8.15855	8.2983	1.0851
57400	57242	389.970	-69.700	-56.500	8.18800	2.41792	8.08093	8.2193	1.0748
57600	57441	389.970	-69.700	-56.500	8.11010	2.39491	8.00404	8.1411	1.0646
57800	57640	389.970	-69.700	-56.500	8.03294	2.37213	7.92789	8.0637	1.0544
58000	57839	389.970	-69.700	-56.500	7.95651	2.34956	7.85247	7.9870	1.0444
58200	58038	389.970	-69.700	-56.500	7.88081	2.32720	7.77776	7.9110	1.0345
58400	58237	389.970	-69.700	-56.500	7.80584	2.30506	7.70376	7.8357	1.0246
58600	58436	389.970	-69.700	-56.500	7.73158	2.28313	7.63047	7.7612	1.0149
58800	58635	389.970	-69.700	-56.500	7.65803	2.26141	7.55788	7.6873	1.0052



TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
59000	59167	389.970	-69.700	-56.500	7.52473 + 1	2.22205 + 0	7.42633 - 2	7.5535 - 3	9.8772 - 2
59200	59369	389.970	-69.700	-56.500	7.45274	2.20079	7.35529	7.4813	9.7827
59400	59570	389.970	-69.700	-56.500	7.38145	2.17974	7.28492	7.4097	9.6891
59600	59771	389.970	-69.700	-56.500	7.31083	2.15889	7.21523	7.3388	9.5964
59800	59972	389.970	-69.700	-56.500	7.24089	2.13823	7.14620	7.2686	9.5046
60000	60173	389.970	-69.700	-56.500	7.17162	2.11778	7.07784	7.1991	9.4137
60200	60374	389.970	-69.700	-56.500	7.10301	2.09752	7.01013	7.1302	9.3237
60400	60575	389.970	-69.700	-56.500	7.03506	2.07745	6.94306	7.0620	9.2345
60600	60777	389.970	-69.700	-56.500	6.96776	2.05758	6.87664	6.9944	9.1461
60800	60978	389.970	-69.700	-56.500	6.90110	2.03789	6.81086	6.9275	9.0586
61000	61179	389.970	-69.700	-56.500	6.83508 + 1	2.01840 + 0	6.74570 - 2	6.8612 - 3	8.9720 - 2
61200	61380	389.970	-69.700	-56.500	6.76969	1.99909	6.68116	6.7956	8.8861
61400	61581	389.970	-69.700	-56.500	6.70493	1.97996	6.61725	6.7306	8.8011
61600	61783	389.970	-69.700	-56.500	6.64078	1.96102	6.55394	6.6662	8.7169
61800	61984	389.970	-69.700	-56.500	6.57725	1.94226	6.49124	6.6024	8.6335
62000	62185	389.970	-69.700	-56.500	6.51433	1.92368	6.42914	6.5393	8.5509
62200	62386	389.970	-69.700	-56.500	6.45201	1.90528	6.36764	6.4767	8.4691
62400	62587	389.970	-69.700	-56.500	6.39029	1.88705	6.30672	6.4147	8.3881
62600	62788	389.970	-69.700	-56.500	6.32915	1.86900	6.24639	6.3534	8.3079
62800	62990	389.970	-69.700	-56.500	6.26860	1.85112	6.18663	6.2926	8.2284
63000	63191	389.970	-69.700	-56.500	6.20864 + 1	1.83341 + 0	6.12745 - 2	6.2324 - 3	8.1497 - 2
63200	63392	389.970	-69.700	-56.500	6.14924	1.81587	6.06883	6.1728	8.0717
63400	63593	389.970	-69.700	-56.500	6.09041	1.79850	6.01077	6.1137	7.9945
63600	63795	389.970	-69.700	-56.500	6.03215	1.78129	5.95327	6.0552	7.9180
63800	63996	389.970	-69.700	-56.500	5.97444	1.76425	5.89631	5.9973	7.8422
64000	64197	389.970	-69.700	-56.500	5.91728	1.74737	5.83991	5.9399	7.7672
64200	64398	389.970	-69.700	-56.500	5.86068	1.73066	5.78404	5.8831	7.6929
64400	64600	389.970	-69.700	-56.500	5.80461	1.71410	5.72870	5.8268	7.6193
64600	64801	389.970	-69.700	-56.500	5.74908	1.69770	5.67390	5.7711	7.5464
64800	65002	389.970	-69.700	-56.500	5.69408	1.68146	5.61962	5.7159	7.4742
65000	65203	389.970	-69.700	-56.500	5.63961 + 1	1.66537 + 0	5.56586 - 2	5.6612 - 3	7.4027 - 2
65200	65404	389.970	-69.700	-56.500	5.58565	1.64944	5.51261	5.6070	7.3319
65400	65606	389.970	-69.700	-56.500	5.53222	1.63366	5.45987	5.5534	7.2618
65600	65807	389.970	-69.700	-56.500	5.47929	1.61803	5.40764	5.5003	7.1923
65800	66008	390.071	-69.599	-56.444	5.42688	1.60256	5.35591	5.4462	7.1217
66000	66210	390.180	-69.490	-56.383	5.37499	1.58723	5.30470	5.3926	7.0516
66200	66411	390.290	-69.380	-56.322	5.32360	1.57206	5.25399	5.3396	6.9822
66400	66612	390.400	-69.270	-56.261	5.27272	1.55703	5.20377	5.2871	6.9135
66600	66813	390.509	-69.161	-56.200	5.22234	1.54216	5.15405	5.2351	6.8455
66800	67015	390.619	-69.051	-56.139	5.17245	1.52742	5.10481	5.1836	6.7783
67000	67216	390.729	-68.941	-56.078	5.12306 + 1	1.51284 + 0	5.05606 - 2	5.1327 - 3	6.7116 - 2
67200	67417	390.839	-68.831	-56.017	5.07415	1.49840	5.00780	5.0823	6.6457
67400	67619	390.948	-68.722	-55.956	5.02572	1.48410	4.96000	5.0323	6.5804
67600	67820	391.058	-68.612	-55.896	4.97777	1.46994	4.91268	4.9829	6.5158
67800	68021	391.168	-68.502	-55.835	4.93029	1.45591	4.86581	4.9340	6.4518
68000	68222	391.278	-68.392	-55.774	4.88327	1.44203	4.81941	4.8856	6.3885
68200	68424	391.387	-68.283	-55.713	4.83672	1.42828	4.77347	4.8376	6.3258
68400	68625	391.497	-68.173	-55.652	4.79062	1.41467	4.72798	4.7902	6.2638
68600	68826	391.607	-68.063	-55.591	4.74497	1.40119	4.68293	4.7432	6.2024
68800	69028	391.716	-67.954	-55.530	4.69978	1.38784	4.63832	4.6967	6.1416
69000	69229	391.826	-67.844	-55.469	4.65502 + 1	1.37463 + 0	4.59415 - 2	4.6507 - 3	6.0814 - 2
69200	69430	391.936	-67.734	-55.408	4.61070	1.36154	4.55041	4.6051	6.0218
69400	69632	392.046	-67.624	-55.347	4.56682	1.34858	4.50710	4.5600	5.9628
69600	69833	392.155	-67.515	-55.286	4.52337	1.33575	4.46422	4.5154	5.9044
69800	70034	392.265	-67.405	-55.225	4.48034	1.32304	4.42175	4.4712	5.8466
70000	70236	392.375	-67.295	-55.164	4.43773	1.31046	4.37970	4.4274	5.7894
70200	70437	392.485	-67.185	-55.103	4.39555	1.29800	4.33807	4.3841	5.7328
70400	70638	392.594	-67.076	-55.042	4.35377	1.28567	4.29684	4.3412	5.6767
70600	70840	392.704	-66.966	-54.981	4.31240	1.27345	4.25601	4.2988	5.6212
70800	71041	392.814	-66.856	-54.920	4.27144	1.26135	4.21558	4.2567	5.5662
71000	71243	392.923	-66.747	-54.859	4.23087 + 1	1.24938 + 0	4.17555 - 2	4.2151 - 3	5.5118 - 2
71200	71444	393.033	-66.637	-54.798	4.19070	1.23751	4.13590	4.1740	5.4580
71400	71645	393.143	-66.527	-54.737	4.15093	1.22577	4.09665	4.1332	5.4047
71600	71847	393.253	-66.417	-54.676	4.11155	1.21414	4.05778	4.0928	5.3519
71800	72048	393.362	-66.308	-54.615	4.07254	1.20262	4.01929	4.0529	5.2997
72000	72249	393.472	-66.198	-54.554	4.03392	1.19122	3.98117	4.0133	5.2479
72200	72451	393.582	-66.088	-54.493	3.99568	1.17992	3.94343	3.9742	5.1967
72400	72652	393.692	-65.978	-54.432	3.95781	1.16874	3.90605	3.9354	5.1460
72600	72854	393.801	-65.869	-54.371	3.92031	1.15767	3.86904	3.8970	5.0959
72800	73055	393.911	-65.759	-54.310	3.88317	1.14670	3.83239	3.8590	5.0462
73000	73256	394.021	-65.649	-54.250	3.84640 + 1	1.13584 + 0	3.79610 - 2	3.8214 - 3	4.9970 - 2
73200	73458	394.130	-65.540	-54.189	3.80998	1.12509	3.76016	3.7842	4.9483
73400	73659	394.240	-65.430	-54.128	3.77392	1.11444	3.72457	3.7473	4.9001
73600	73861	394.350	-65.320	-54.067	3.73821	1.10389	3.68933	3.7108	4.8524
73800	74062	394.460	-65.210	-54.006	3.70285	1.09345	3.65443	3.6747	4.8052
74000	74264	394.569	-65.101	-53.945	3.66783	1.08311	3.61987	3.6389	4.7584
74200	74465	394.679	-64.991	-53.884	3.63315	1.07287	3.58564	3.6035	4.7121
74400	74666	394.789	-64.881	-53.823	3.59881	1.06273	3.55175	3.5685	4.6663
74600	74868	394.899	-64.771	-53.762	3.56481	1.05269	3.51819	3.5338	4.6209
74800	75069	395.008	-64.662	-53.701	3.53113	1.04274	3.48496	3.4994	4.5760

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
59000	58834	389.970	-69.700	-56.500	7.58517 + 1	2.23990 + 0	7.48599 - 2	7.6142 - 3	9.9566 - 2
59200	59032	389.970	-69.700	-56.500	7.51302	2.21859	7.41477	7.5418	9.8618
59400	59231	389.970	-69.700	-56.500	7.44155	2.19749	7.34424	7.4700	9.7680
59600	59430	389.970	-69.700	-56.500	7.37076	2.17658	7.27437	7.3990	9.6751
59800	59629	389.970	-69.700	-56.500	7.30065	2.15588	7.20518	7.3286	9.5831
60000	59828	389.970	-69.700	-56.500	7.23120	2.13537	7.13664	7.2589	9.4919
60200	60027	389.970	-69.700	-56.500	7.16242	2.11506	7.06876	7.1898	9.4016
60400	60226	389.970	-69.700	-56.500	7.09429	2.09494	7.00152	7.1214	9.3122
60600	60424	389.970	-69.700	-56.500	7.02681	2.07502	6.93493	7.0537	9.2236
60800	60623	389.970	-69.700	-56.500	6.95998	2.05528	6.86896	6.9866	9.1359
61000	60822	389.970	-69.700	-56.500	6.89378 + 1	2.03573 + 0	6.80363 - 2	6.9202 - 3	9.0490 - 2
61200	61021	389.970	-69.700	-56.500	6.82821	2.01637	6.73892	6.8543	8.9629
61400	61220	389.970	-69.700	-56.500	6.76327	1.99719	6.67483	6.7891	8.8777
61600	61419	389.970	-69.700	-56.500	6.69895	1.97820	6.61135	6.7246	8.7933
61800	61617	389.970	-69.700	-56.500	6.63523	1.95938	6.54847	6.6606	8.7096
62000	61816	389.970	-69.700	-56.500	6.57213	1.94075	6.48619	6.5973	8.6268
62200	62015	389.970	-69.700	-56.500	6.50963	1.92229	6.42450	6.5345	8.5448
62400	62214	389.970	-69.700	-56.500	6.44772	1.90401	6.36341	6.4724	8.4635
62600	62413	389.970	-69.700	-56.500	6.38641	1.88590	6.30289	6.4108	8.3830
62800	62611	389.970	-69.700	-56.500	6.32567	1.86797	6.24295	6.3499	8.3033
63000	62810	389.970	-69.700	-56.500	6.26552 + 1	1.85021 + 0	6.18359 - 2	6.2895 - 3	8.2243 - 2
63200	63009	389.970	-69.700	-56.500	6.20594	1.83261	6.12479	6.2297	8.1461
63400	63208	389.970	-69.700	-56.500	6.14693	1.81519	6.06654	6.1704	8.0687
63600	63407	389.970	-69.700	-56.500	6.08848	1.79793	6.00886	6.1118	7.9919
63800	63605	389.970	-69.700	-56.500	6.03058	1.78083	5.95172	6.0537	7.9159
64000	63804	389.970	-69.700	-56.500	5.97324	1.76390	5.89513	5.9961	7.8407
64200	64003	389.970	-69.700	-56.500	5.91644	1.74713	5.83908	5.9391	7.7661
64400	64202	389.970	-69.700	-56.500	5.86019	1.73051	5.78356	5.8826	7.6923
64600	64400	389.970	-69.700	-56.500	5.80447	1.71406	5.72857	5.8267	7.6191
64800	64599	389.970	-69.700	-56.500	5.74928	1.69776	5.67410	5.7713	7.5467
65000	64798	389.970	-69.700	-56.500	5.69462 + 1	1.68162 + 0	5.62015 - 2	5.7164 - 3	7.4749 - 2
65200	64997	389.970	-69.700	-56.500	5.64048	1.66563	5.56672	5.6621	7.4039
65400	65196	389.970	-69.700	-56.500	5.58685	1.64980	5.51380	5.6082	7.3335
65600	65394	389.970	-69.700	-56.500	5.53374	1.63411	5.46138	5.5549	7.2638
65800	65593	389.970	-69.700	-56.500	5.48113	1.61858	5.40945	5.5021	7.1947
66000	65792	390.066	-69.604	-56.447	5.42903	1.60319	5.35804	5.4485	7.1266
66200	65991	390.175	-69.495	-56.386	5.37744	1.58796	5.30712	5.3952	7.0549
66400	66189	390.284	-69.386	-56.326	5.32635	1.57287	5.25670	5.3424	6.9859
66600	66388	390.393	-69.277	-56.265	5.27577	1.55793	5.20678	5.2902	6.9176
66800	66587	390.502	-69.168	-56.204	5.22568	1.54314	5.15734	5.2385	6.8500
67000	66785	390.611	-69.059	-56.144	5.17608 + 1	1.52849 + 0	5.10839 - 2	5.1874 - 3	6.7831 - 2
67200	66984	390.720	-68.950	-56.083	5.12694	1.51399	5.05991	5.1367	6.7169
67400	67183	390.829	-68.841	-56.023	5.07833	1.49963	5.01192	5.0866	6.6513
67600	67382	390.938	-68.732	-55.962	5.03017	1.48541	4.96439	5.0369	6.5864
67800	67580	391.047	-68.623	-55.902	4.98248	1.47133	4.91732	4.9878	6.5222
68000	67779	391.156	-68.514	-55.841	4.93526	1.45738	4.87072	4.9391	6.4585
68200	67978	391.265	-68.405	-55.780	4.88850	1.44357	4.82457	4.8910	6.3956
68400	68176	391.374	-68.296	-55.720	4.84219	1.42990	4.77887	4.8433	6.3332
68600	68375	391.483	-68.187	-55.659	4.79634	1.41636	4.73362	4.7961	6.2715
68800	68574	391.592	-68.078	-55.599	4.75094	1.40295	4.68881	4.7494	6.2104
69000	68772	391.701	-67.969	-55.538	4.70598 + 1	1.38967 + 0	4.64444 - 2	4.7031 - 3	6.1499 - 2
69200	68971	391.810	-67.860	-55.478	4.66146	1.37653	4.60050	4.6573	6.0900
69400	69170	391.919	-67.751	-55.417	4.61737	1.36351	4.55699	4.6120	6.0308
69600	69368	392.028	-67.642	-55.356	4.57371	1.35062	4.51390	4.5671	5.9721
69800	69567	392.137	-67.533	-55.296	4.53048	1.33785	4.47124	4.5227	5.9140
70000	69766	392.246	-67.424	-55.235	4.48767	1.32521	4.42898	4.4787	5.8565
70200	69964	392.355	-67.315	-55.175	4.44527	1.31269	4.38714	4.4352	5.7995
70400	70163	392.464	-67.206	-55.114	4.40329	1.30029	4.34571	4.3921	5.7432
70600	70362	392.573	-67.097	-55.054	4.36172	1.28802	4.30468	4.3494	5.6874
70800	70560	392.682	-66.988	-54.993	4.32055	1.27586	4.26405	4.3071	5.6321
71000	70759	392.791	-66.879	-54.933	4.27978 + 1	1.26382 + 0	4.22382 - 2	4.2653 - 3	5.5774 - 2
71200	70958	392.900	-66.770	-54.872	4.23941	1.25190	4.18398	4.2239	5.5233
71400	71156	393.009	-66.661	-54.812	4.19943	1.24009	4.14452	4.1829	5.4697
71600	71355	393.118	-66.552	-54.751	4.15985	1.22840	4.10545	4.1423	5.4166
71800	71554	393.227	-66.443	-54.690	4.12064	1.21683	4.06676	4.1021	5.3641
72000	71752	393.336	-66.334	-54.630	4.08182	1.20536	4.02844	4.0624	5.3121
72200	71951	393.445	-66.225	-54.569	4.04337	1.19401	3.99050	4.0230	5.2606
72400	72150	393.554	-66.116	-54.509	4.00530	1.18276	3.95293	3.9840	5.2096
72600	72348	393.663	-66.007	-54.448	3.96760	1.17163	3.91571	3.9454	5.1591
72800	72547	393.772	-65.898	-54.388	3.93026	1.16060	3.87886	3.9072	5.1092
73000	72745	393.881	-65.789	-54.327	3.89328 + 1	1.14969 + 0	3.84237 - 2	3.8694 - 3	5.0597 - 2
73200	72944	393.990	-65.680	-54.267	3.85667	1.13887	3.80623	3.8319	5.0107
73400	73143	394.099	-65.571	-54.206	3.82044	1.12817	3.77045	3.7948	4.9623
73600	73341	394.208	-65.462	-54.146	3.78449	1.11756	3.73501	3.7581	4.9142
73800	73540	394.317	-65.353	-54.085	3.74893	1.10706	3.69991	3.7218	4.8667
74000	73738	394.426	-65.244	-54.025	3.71372	1.09666	3.66515	3.6858	4.8197
74200	73937	394.535	-65.135	-53.964	3.67884	1.08636	3.63073	3.6502	4.7731
74400	74135	394.644	-65.026	-53.904	3.64430	1.07616	3.59665	3.6149	4.7270
74600	74334	394.753	-64.917	-53.843	3.61010	1.06606	3.56289	3.5800	4.6813
74800	74533	394.862	-64.808	-53.782	3.57622	1.05606	3.52946	3.5454	4.6361

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
75000	75271	395.118	-64.552	-53.640	3.49779 + 1	1.03290 + 0	3.45205 - 2	3.4654 - 3	4.5315 - 2
75200	75472	395.228	-64.442	-53.579	3.46476	1.02314	3.41945	3.4318	4.4875
75400	75674	395.337	-64.333	-53.518	3.43206	1.01349	3.38718	3.3984	4.4439
75600	75875	395.447	-64.223	-53.457	3.39967	1.00392	3.35522	3.3654	4.4007
75800	76077	395.557	-64.113	-53.396	3.36760	9.94453 - 1	3.32357	3.3327	4.3580
76000	76278	395.667	-64.003	-53.335	3.33584	9.85074	3.29222	3.3004	4.3157
76200	76479	395.776	-63.894	-53.274	3.30439	9.75787	3.26118	3.2684	4.2738
76400	76681	395.886	-63.784	-53.213	3.27325	9.66589	3.23044	3.2367	4.2324
76600	76882	395.996	-63.674	-53.152	3.24240	9.57481	3.20000	3.2053	4.1913
76800	77084	396.106	-63.564	-53.091	3.21186	9.48461	3.16986	3.1742	4.1507
77000	77285	396.215	-63.455	-53.030	3.18161 + 1	9.39529 - 1	3.14001 - 2	3.1434 - 3	4.1105 - 2
77200	77487	396.325	-63.345	-52.969	3.15165	9.30682	3.11044	3.1130	4.0706
77400	77688	396.435	-63.235	-52.908	3.12199	9.21922	3.08116	3.0828	4.0312
77600	77890	396.544	-63.126	-52.848	3.09261	9.13248	3.05217	3.0530	3.9922
77800	78091	396.654	-63.016	-52.787	3.06352	9.04656	3.02345	3.0234	3.9535
78000	78293	396.764	-62.906	-52.726	3.03471	8.96148	2.99502	2.9942	3.9152
78200	78494	396.874	-62.796	-52.665	3.00617	8.87722	2.96686	2.9652	3.8774
78400	78696	396.983	-62.687	-52.604	2.97791	8.79377	2.93897	2.9365	3.8399
78600	78897	397.093	-62.577	-52.543	2.94993	8.71114	2.91136	2.9081	3.8027
78800	79099	397.203	-62.467	-52.482	2.92222	8.62931	2.88400	2.8800	3.7660
79000	79300	397.313	-62.357	-52.421	2.89477 + 1	8.54826 - 1	2.85692 - 2	2.8521 - 3	3.7296 - 2
79200	79502	397.422	-62.248	-52.360	2.86759	8.46799	2.83009	2.8246	3.6935
79400	79703	397.532	-62.138	-52.299	2.84067	8.38851	2.80353	2.7973	3.6578
79600	79905	397.642	-62.028	-52.238	2.81402	8.30979	2.77722	2.7703	3.6225
79800	80107	397.751	-61.919	-52.177	2.78762	8.23183	2.75116	2.7435	3.5875
80000	80308	397.861	-61.809	-52.116	2.76147	8.15462	2.72536	2.7171	3.5529
80200	80510	397.971	-61.699	-52.055	2.73558	8.07816	2.69980	2.6908	3.5186
80400	80711	398.081	-61.589	-51.994	2.70993	8.00243	2.67450	2.6649	3.4847
80600	80913	398.190	-61.480	-51.933	2.68454	7.92744	2.64943	2.6392	3.4511
80800	81114	398.300	-61.370	-51.872	2.65939	7.85317	2.62461	2.6137	3.4178
81000	81316	398.410	-61.260	-51.811	2.63448 + 1	7.77962 - 1	2.60003 - 2	2.5885 - 3	3.3849 - 2
81200	81517	398.520	-61.150	-51.750	2.60981	7.70677	2.57568	2.5636	3.3522
81400	81719	398.629	-61.041	-51.689	2.58538	7.63463	2.55157	2.5389	3.3199
81600	81921	398.739	-60.931	-51.628	2.56118	7.56317	2.52769	2.5144	3.2880
81800	82122	398.849	-60.821	-51.567	2.53722	7.49241	2.50404	2.4902	3.2563
82000	82324	398.958	-60.712	-51.506	2.51349	7.42233	2.48062	2.4663	3.2250
82200	82525	399.068	-60.602	-51.445	2.48999	7.35293	2.45743	2.4425	3.1939
82400	82727	399.178	-60.492	-51.384	2.46671	7.28419	2.43445	2.4190	3.1632
82600	82928	399.288	-60.382	-51.323	2.44366	7.21612	2.41170	2.3958	3.1328
82800	83130	399.397	-60.273	-51.262	2.42083	7.14870	2.38917	2.3727	3.1027
83000	83332	399.507	-60.163	-51.202	2.39821 + 1	7.08192 - 1	2.36685 - 2	2.3499 - 3	3.0728 - 2
83200	83533	399.617	-60.053	-51.141	2.37582	7.01579	2.34475	2.3273	3.0433
83400	83735	399.727	-59.943	-51.080	2.35364	6.95029	2.32286	2.3050	3.0141
83600	83937	399.836	-59.834	-51.019	2.33167	6.88543	2.30118	2.2828	2.9851
83800	84138	399.946	-59.724	-50.958	2.30992	6.82119	2.27971	2.2609	2.9564
84000	84340	400.056	-59.614	-50.897	2.28837	6.75756	2.25845	2.2392	2.9281
84200	84541	400.165	-59.505	-50.836	2.26703	6.69454	2.23739	2.2177	2.9000
84400	84743	400.275	-59.395	-50.775	2.24590	6.63213	2.21653	2.1964	2.8721
84600	84945	400.386	-59.285	-50.714	2.22496	6.57031	2.19587	2.1754	2.8446
84800	85146	400.495	-59.175	-50.653	2.20423	6.50910	2.17541	2.1545	2.8173
85000	85348	400.604	-59.066	-50.592	2.18370 + 1	6.44846 - 1	2.15514 - 2	2.1339 - 3	2.7903 - 2
85200	85550	400.714	-58.956	-50.531	2.16336	6.38841	2.13507	2.1134	2.7636
85400	85751	400.824	-58.846	-50.470	2.14322	6.32893	2.11520	2.0932	2.7371
85600	85953	400.934	-58.736	-50.409	2.12327	6.27003	2.09551	2.0731	2.7109
85800	86154	401.043	-58.627	-50.348	2.10352	6.21169	2.07601	2.0533	2.6849
86000	86356	401.153	-58.517	-50.287	2.08395	6.15390	2.05670	2.0336	2.6592
86200	86558	401.263	-58.407	-50.226	2.06457	6.09667	2.03757	2.0141	2.6338
86400	86759	401.372	-58.298	-50.165	2.04538	6.03999	2.01863	1.9949	2.6086
86600	86961	401.482	-58.188	-50.104	2.02636	5.98385	1.99987	1.9758	2.5836
86800	87163	401.592	-58.078	-50.043	2.00753	5.92824	1.98128	1.9569	2.5589
87000	87364	401.702	-57.968	-49.982	1.98888 + 1	5.87317 - 1	1.96288 - 2	1.9382 - 3	2.5344 - 2
87200	87566	401.811	-57.859	-49.921	1.97041	5.81862	1.94465	1.9197	2.5102
87400	87768	401.921	-57.749	-49.860	1.95212	5.76460	1.92659	1.9013	2.4862
87600	87970	402.031	-57.639	-49.800	1.93400	5.71109	1.90871	1.8832	2.4625
87800	88171	402.141	-57.529	-49.739	1.91605	5.65809	1.89099	1.8652	2.4390
88000	88373	402.250	-57.420	-49.678	1.89828	5.60560	1.87345	1.8474	2.4157
88200	88575	402.360	-57.310	-49.617	1.88067	5.55361	1.85608	1.8297	2.3926
88400	88776	402.470	-57.200	-49.556	1.86323	5.50212	1.83887	1.8123	2.3698
88600	88978	402.579	-57.090	-49.495	1.84596	5.45112	1.82182	1.7950	2.3472
88800	89180	402.689	-56.981	-49.434	1.82885	5.40060	1.80494	1.7779	2.3248
89000	89381	402.799	-56.871	-49.373	1.81191 + 1	5.35056 - 1	1.78822 - 2	1.7609 - 3	2.3026 - 2
89200	89583	402.909	-56.761	-49.312	1.79513	5.30101	1.77165	1.7444	2.2807
89400	89785	403.018	-56.652	-49.251	1.77850	5.25192	1.75525	1.7275	2.2589
89600	89987	403.128	-56.542	-49.190	1.76204	5.20330	1.73900	1.7110	2.2374
89800	90188	403.238	-56.432	-49.129	1.74573	5.15515	1.72291	1.6948	2.2161
90000	90390	403.348	-56.322	-49.068	1.72958	5.10745	1.70696	1.6786	2.1950
90200	90592	403.457	-56.213	-49.007	1.71358	5.06021	1.69118	1.6626	2.1741
90400	90794	403.567	-56.103	-48.946	1.69774	5.01342	1.67554	1.6468	2.1534
90600	90995	403.677	-55.993	-48.885	1.68204	4.96707	1.66005	1.6311	2.1329
90800	91197	403.787	-55.883	-48.824	1.66650	4.92117	1.64471	1.6156	2.1127

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
75000	74731	394.971	-64.699	-53.722	3.54268 + 1	1.04615 + 0	3.49635 - 2	3.5112 - 3	4.5914 - 2
75200	74930	395.079	-64.591	-53.661	3.50945	1.03634	3.46356	3.4773	4.5471
75400	75128	395.188	-64.482	-53.601	3.47656	1.02663	3.43109	3.4438	4.5032
75600	75327	395.297	-64.373	-53.540	3.44397	1.01701	3.39894	3.4106	4.4598
75800	75525	395.406	-64.264	-53.480	3.41171	1.00748	3.36709	3.3777	4.4167
76000	75724	395.515	-64.155	-53.419	3.37975	9.98040 - 1	3.33555	3.3451	4.3742
76200	75923	395.624	-64.046	-53.359	3.34810	9.88695	3.30432	3.3129	4.3320
76400	76121	395.733	-63.937	-53.298	3.31676	9.79440	3.27339	3.2810	4.2903
76600	76320	395.842	-63.828	-53.238	3.28572	9.70274	3.24276	3.2494	4.2490
76800	76518	395.951	-63.719	-53.177	3.25498	9.61196	3.21242	3.2181	4.2081
77000	76717	396.060	-63.610	-53.117	3.22454 + 1	9.52207 - 1	3.18238 - 2	3.1871 - 3	4.1676 - 2
77200	76915	396.169	-63.501	-53.056	3.19439	9.43303	3.15262	3.1564	4.1275
77400	77114	396.278	-63.392	-52.996	3.16453	9.34486	3.12315	3.1261	4.0878
77600	77312	396.387	-63.283	-52.935	3.13496	9.25754	3.09397	3.0960	4.0484
77800	77511	396.496	-63.174	-52.875	3.10567	9.17105	3.06506	3.0662	4.0095
78000	77709	396.604	-63.066	-52.814	3.07667	9.08540	3.03644	3.0368	3.9710
78200	77908	396.713	-62.957	-52.754	3.04795	9.00058	3.00809	3.0076	3.9328
78400	78106	396.822	-62.848	-52.693	3.01950	8.91657	2.98001	2.9787	3.8951
78600	78305	396.931	-62.739	-52.633	2.99132	8.83337	2.95221	2.9501	3.8576
78800	78503	397.040	-62.630	-52.572	2.96342	8.75098	2.92467	2.9218	3.8206
79000	78702	397.149	-62.521	-52.512	2.93578 + 1	8.66936 - 1	2.89739 - 2	2.8937 - 3	3.7839 - 2
79200	78900	397.258	-62.412	-52.451	2.90841	8.58854	2.87038	2.8660	3.7476
79400	79099	397.367	-62.303	-52.391	2.88131	8.50850	2.84363	2.8385	3.7117
79600	79297	397.476	-62.194	-52.330	2.85446	8.42923	2.81714	2.8113	3.6761
79800	79496	397.585	-62.085	-52.270	2.82787	8.35071	2.79089	2.7843	3.6409
80000	79694	397.693	-61.977	-52.209	2.80154	8.27295	2.76491	2.7576	3.6060
80200	79893	397.802	-61.868	-52.149	2.77546	8.19593	2.73917	2.7312	3.5714
80400	80091	397.911	-61.759	-52.088	2.74963	8.11966	2.71368	2.7051	3.5372
80600	80290	398.020	-61.650	-52.028	2.72405	8.04412	2.68843	2.6792	3.5034
80800	80488	398.129	-61.541	-51.967	2.69871	7.96930	2.66342	2.6535	3.4698
81000	80687	398.238	-61.432	-51.907	2.67362 + 1	7.89520 - 1	2.63866 - 2	2.6281 - 3	3.4366 - 2
81200	80885	398.347	-61.323	-51.846	2.64877	7.82180	2.61413	2.6030	3.4037
81400	81083	398.456	-61.214	-51.786	2.62415	7.74912	2.58984	2.5781	3.3712
81600	81282	398.565	-61.105	-51.725	2.59977	7.67713	2.56578	2.5534	3.3390
81800	81480	398.673	-60.997	-51.665	2.57563	7.60583	2.54195	2.5290	3.3070
82000	81679	398.782	-60.888	-51.604	2.55171	7.53521	2.51835	2.5049	3.2754
82200	81877	398.891	-60.779	-51.544	2.52803	7.46527	2.49497	2.4809	3.2442
82400	82076	399.000	-60.670	-51.483	2.50457	7.39600	2.47182	2.4573	3.2132
82600	82274	399.109	-60.561	-51.423	2.48134	7.32738	2.44889	2.4338	3.1825
82800	82473	399.218	-60.452	-51.362	2.45832	7.25943	2.42618	2.4106	3.1521
83000	82671	399.327	-60.343	-51.302	2.43553 + 1	7.19213 - 1	2.40368 - 2	2.3876 - 3	3.1221 - 2
83200	82869	399.435	-60.235	-51.241	2.41296	7.12547	2.38141	2.3648	3.0923
83400	83068	399.544	-60.126	-51.181	2.39060	7.05944	2.35934	2.3422	3.0628
83600	83266	399.653	-60.017	-51.120	2.36846	6.99405	2.33749	2.3199	3.0336
83800	83465	399.762	-59.908	-51.060	2.34652	6.92928	2.31584	2.2978	3.0047
84000	83663	399.871	-59.799	-51.000	2.32480	6.86513	2.29440	2.2759	2.9761
84200	83861	399.980	-59.690	-50.939	2.30328	6.80159	2.27316	2.2542	2.9477
84400	84060	400.089	-59.581	-50.879	2.28197	6.73866	2.25213	2.2328	2.9196
84600	84258	400.197	-59.473	-50.818	2.26087	6.67633	2.23130	2.2115	2.8918
84800	84457	400.306	-59.364	-50.758	2.23996	6.61459	2.21067	2.1905	2.8643
85000	84655	400.415	-59.255	-50.697	2.21925 + 1	6.55344 - 1	2.19023 - 2	2.1696 - 3	2.8371 - 2
85200	84853	400.524	-59.146	-50.637	2.19874	6.49288	2.16999	2.1490	2.8101
85400	85052	400.633	-59.037	-50.576	2.17843	6.43289	2.14994	2.1286	2.7834
85600	85250	400.742	-58.928	-50.516	2.15831	6.37347	2.13008	2.1083	2.7569
85800	85448	400.850	-58.820	-50.455	2.13838	6.31462	2.11041	2.0883	2.7307
86000	85647	400.959	-58.711	-50.395	2.11864	6.25635	2.09093	2.0685	2.7048
86200	85845	401.068	-58.602	-50.334	2.09909	6.19860	2.07164	2.0488	2.6791
86400	86043	401.177	-58.493	-50.274	2.07972	6.14141	2.05252	2.0294	2.6536
86600	86242	401.286	-58.384	-50.213	2.06054	6.08477	2.03359	2.0101	2.6285
86800	86440	401.395	-58.275	-50.153	2.04154	6.02866	2.01484	1.9910	2.6035
87000	86639	401.503	-58.167	-50.093	2.02272 + 1	5.97309 - 1	1.99627 - 2	1.9721 - 3	2.5788 - 2
87200	86837	401.612	-58.058	-50.032	2.00408	5.91805	1.97787	1.9534	2.5544
87400	87035	401.721	-57.949	-49.972	1.98562	5.86353	1.95965	1.9349	2.5301
87600	87234	401.830	-57.840	-49.911	1.96733	5.80953	1.94161	1.9166	2.5062
87800	87432	401.939	-57.731	-49.851	1.94922	5.75604	1.92373	1.8984	2.4824
88000	87630	402.047	-57.623	-49.790	1.93128	5.70306	1.90602	1.8804	2.4589
88200	87829	402.156	-57.514	-49.730	1.91350	5.65058	1.88848	1.8626	2.4356
88400	88027	402.265	-57.405	-49.669	1.89590	5.59860	1.87111	1.8450	2.4126
88600	88225	402.374	-57.296	-49.609	1.87847	5.54711	1.85390	1.8275	2.3897
88800	88423	402.483	-57.187	-49.549	1.86120	5.49611	1.83686	1.8102	2.3671
89000	88622	402.591	-57.079	-49.488	1.84409 + 1	5.44560 - 1	1.81998 - 2	1.7931 - 3	2.3447 - 2
89200	88820	402.700	-56.970	-49.428	1.82715	5.39556	1.80325	1.7762	2.3226
89400	89018	402.809	-56.861	-49.367	1.81036	5.34599	1.78669	1.7594	2.3006
89600	89217	402.918	-56.752	-49.307	1.79374	5.29690	1.77028	1.7427	2.2789
89800	89415	403.027	-56.643	-49.246	1.77727	5.24827	1.75403	1.7263	2.2573
90000	89613	403.135	-56.535	-49.186	1.76096	5.20011	1.73793	1.7100	2.2360
90200	89812	403.244	-56.426	-49.125	1.74480	5.15239	1.72198	1.6938	2.2149
90400	90010	403.353	-56.317	-49.065	1.72880	5.10513	1.70619	1.6778	2.1940
90600	90208	403.462	-56.208	-49.005	1.71294	5.05832	1.69054	1.6620	2.1733
90800	90406	403.571	-56.099	-48.944	1.69724	5.01194	1.67504	1.6463	2.1528

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
91000	91399	403.896	-55.774	-48.763	1.65110 + 1	4.87570 - 1	1.62951 - 2	1.6003 - 3	2.0926 - 2
91200	91601	404.006	-55.664	-48.702	1.63585	4.83066	1.61446	1.5851	2.0727
91400	91802	404.116	-55.554	-48.641	1.62074	4.78605	1.59955	1.5700	2.0530
91600	92004	404.225	-55.445	-48.580	1.60578	4.74187	1.58478	1.5551	2.0335
91800	92206	404.335	-55.335	-48.519	1.59096	4.69810	1.57015	1.5403	2.0142
92000	92408	404.445	-55.225	-48.458	1.57628	4.65475	1.55567	1.5257	1.9950
92200	92609	404.555	-55.115	-48.397	1.56174	4.61182	1.54132	1.5112	1.9761
92400	92811	404.664	-55.006	-48.336	1.54734	4.56928	1.52710	1.4969	1.9573
92600	93013	404.774	-54.896	-48.276	1.53307	4.52716	1.51302	1.4827	1.9388
92800	93215	404.884	-54.786	-48.215	1.51894	4.48543	1.49908	1.4686	1.9204
93000	93417	404.994	-54.676	-48.154	1.50494 + 1	4.44410 - 1	1.48526 - 2	1.4547 - 3	1.9022 - 2
93200	93618	405.103	-54.567	-48.093	1.49108	4.40316	1.47158	1.4409	1.8841
93400	93820	405.213	-54.457	-48.032	1.47735	4.36261	1.45803	1.4272	1.8663
93600	94022	405.323	-54.347	-47.971	1.46375	4.32244	1.44460	1.4137	1.8486
93800	94224	405.432	-54.238	-47.910	1.45027	4.28265	1.43131	1.4003	1.8311
94000	94426	405.542	-54.128	-47.849	1.43693	4.24324	1.41814	1.3870	1.8137
94200	94627	405.652	-54.018	-47.788	1.42371	4.20421	1.40509	1.3739	1.7966
94400	94829	405.762	-53.908	-47.727	1.41061	4.16554	1.39217	1.3609	1.7796
94600	95031	405.871	-53.799	-47.666	1.39764	4.12724	1.37937	1.3480	1.7627
94800	95233	405.981	-53.689	-47.605	1.38479	4.08930	1.36669	1.3353	1.7460
95000	95435	406.091	-53.579	-47.544	1.37207 + 1	4.05172 - 1	1.35413 - 2	1.3226 - 3	1.7295 - 2
95200	95637	406.201	-53.469	-47.483	1.35946	4.01449	1.34169	1.3101	1.7132
95400	95838	406.310	-53.360	-47.422	1.34698	3.97762	1.32936	1.2978	1.6970
95600	96040	406.420	-53.250	-47.361	1.33461	3.94110	1.31716	1.2855	1.6809
95800	96242	406.530	-53.140	-47.300	1.32236	3.90492	1.30506	1.2733	1.6651
96000	96444	406.639	-53.031	-47.239	1.31022	3.86908	1.29309	1.2613	1.6493
96200	96646	406.749	-52.921	-47.178	1.29820	3.83358	1.28122	1.2494	1.6338
96400	96848	406.859	-52.811	-47.117	1.28629	3.79842	1.26947	1.2376	1.6183
96600	97050	406.969	-52.701	-47.056	1.27450	3.76358	1.25783	1.2259	1.6031
96800	97251	407.078	-52.592	-46.995	1.26281	3.72908	1.24630	1.2144	1.5879
97000	97453	407.188	-52.482	-46.934	1.25124 + 1	3.69490 - 1	1.23488 - 2	1.2029 - 3	1.5730 - 2
97200	97655	407.298	-52.372	-46.873	1.23977	3.66105	1.22356	1.1916	1.5581
97400	97857	407.408	-52.262	-46.812	1.22842	3.62751	1.21235	1.1803	1.5434
97600	98059	407.517	-52.153	-46.752	1.21717	3.59429	1.20125	1.1692	1.5289
97800	98261	407.627	-52.043	-46.691	1.20602	3.56138	1.19025	1.1582	1.5145
98000	98463	407.737	-51.933	-46.630	1.19498	3.52879	1.17936	1.1473	1.5002
98200	98665	407.846	-51.824	-46.569	1.18405	3.49650	1.16857	1.1365	1.4861
98400	98867	407.956	-51.714	-46.508	1.17322	3.46451	1.15788	1.1258	1.4721
98600	99068	408.066	-51.604	-46.447	1.16249	3.43283	1.14729	1.1152	1.4583
98800	99270	408.176	-51.494	-46.386	1.15186	3.40144	1.13680	1.1047	1.4445
99000	99472	408.285	-51.385	-46.325	1.14133 + 1	3.37035 - 1	1.12641 - 2	1.0943 - 3	1.4309 - 2
99200	99674	408.395	-51.275	-46.264	1.13090	3.33955	1.11611	1.0840	1.4175
99400	99876	408.505	-51.165	-46.203	1.12057	3.30904	1.10592	1.0738	1.4042
99600	100078	408.615	-51.055	-46.142	1.11034	3.27882	1.09582	1.0637	1.3910
99800	100280	408.724	-50.946	-46.081	1.10020	3.24888	1.08581	1.0537	1.3779
100000	100482	408.834	-50.836	-46.020	1.09015	3.21922	1.07590	1.0438	1.3649
100200	100684	408.944	-50.726	-45.959	1.08020	3.18984	1.06608	1.0340	1.3521
100400	100886	409.053	-50.617	-45.898	1.07035	3.16074	1.05635	1.0243	1.3394
100600	101088	409.163	-50.507	-45.837	1.06059	3.13191	1.04672	1.0147	1.3269
100800	101290	409.273	-50.397	-45.776	1.05092	3.10335	1.03717	1.0052	1.3144
101000	101492	409.383	-50.287	-45.715	1.04133 + 1	3.07506 - 1	1.02772 - 2	9.9575 - 4	1.3021 - 2
101200	101694	409.492	-50.178	-45.654	1.03184	3.04703	1.01835	9.8641	1.2899
101400	101895	409.602	-50.068	-45.593	1.02244	3.01927	1.00907	9.7716	1.2778
101600	102097	409.712	-49.958	-45.532	1.01313	2.99177	9.99881 - 3	9.6800	1.2658
101800	102299	409.822	-49.848	-45.471	1.00390	2.96453	9.90776	9.5893	1.2539
102000	102501	409.931	-49.739	-45.410	9.94763 + 0	2.93754	9.81755	9.4995	1.2422
102200	102703	410.041	-49.629	-45.349	9.85709	2.91080	9.72819	9.4105	1.2305
102400	102905	410.151	-49.519	-45.288	9.76741	2.88431	9.63968	9.3224	1.2190
102600	103107	410.260	-49.410	-45.228	9.67855	2.85807	9.55199	9.2351	1.2076
102800	103309	410.370	-49.300	-45.167	9.59053	2.83208	9.46511	9.1486	1.1963
103000	103511	410.480	-49.190	-45.106	9.50333 + 0	2.80633 - 1	9.37906 - 3	9.0630 - 4	1.1851 - 2
103200	103713	410.590	-49.080	-45.045	9.41695	2.78082	9.29380	8.9783	1.1740
103400	103915	410.699	-48.971	-44.984	9.33138	2.75555	9.20935	8.8943	1.1630
103600	104117	410.809	-48.861	-44.923	9.24660	2.73052	9.12569	8.8111	1.1522
103800	104319	410.919	-48.751	-44.862	9.16262	2.70572	9.04280	8.7288	1.1414
104000	104521	411.029	-48.641	-44.801	9.07943	2.68115	8.96070	8.6472	1.1307
104200	104723	411.138	-48.532	-44.740	8.99700	2.65681	8.87935	8.5664	1.1202
104400	104925	411.248	-48.422	-44.679	8.91535	2.63270	8.79877	8.4864	1.1097
104600	105127	411.358	-48.312	-44.618	8.83447	2.60882	8.71895	8.4072	1.0993
104800	105329	411.467	-48.203	-44.557	8.75434	2.58516	8.63986	8.3287	1.0891
105000	105531	411.590	-48.080	-44.489	8.67495 + 0	2.56171 - 1	8.56151 - 3	8.2507 - 4	1.0789 - 2
105500	106036	412.358	-47.312	-44.062	8.47984	2.50410	8.36895	8.0501	1.0527
106000	106542	413.126	-46.544	-43.635	8.28947	2.44788	8.18107	7.8548	1.0271
106500	107047	413.894	-45.776	-43.209	8.10371	2.39303	7.99774	7.6645	1.0022
107000	107552	414.663	-45.007	-42.782	7.92245	2.33950	7.81885	7.4792	9.7800 - 3
107500	108057	415.431	-44.239	-42.355	7.74557	2.28727	7.64428	7.2987	9.5440
108000	108562	416.199	-43.471	-41.928	7.57295	2.23629	7.47392	7.1229	9.3141
108500	109067	416.967	-42.703	-41.502	7.40449	2.18654	7.30766	6.9516	9.0901
109000	109573	417.735	-41.935	-41.075	7.24007	2.13799	7.14540	6.7847	8.8719
109500	110078	418.503	-41.167	-40.648	7.07960	2.09060	6.98702	6.6222	8.6593



TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

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Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
91000	90605	403.679	-55.991	-48.884	1.68168 + 1	4.96601 - 1	1.65969 - 2	1.6308 - 3	2.1325 - 2
91200	90803	403.788	-55.882	-48.823	1.66628	4.92051	1.64449	1.6154	2.1124
91400	91001	403.897	-55.773	-48.763	1.65101	4.87544	1.62942	1.6002	2.0924
91600	91199	404.006	-55.664	-48.702	1.63590	4.83080	1.61450	1.5851	2.0727
91800	91398	404.114	-55.556	-48.642	1.62092	4.78658	1.59972	1.5702	2.0532
92000	91596	404.223	-55.447	-48.582	1.60609	4.74277	1.58508	1.5554	2.0339
92200	91794	404.332	-55.338	-48.521	1.59139	4.69938	1.57058	1.5407	2.0147
92400	91992	404.441	-55.229	-48.461	1.57684	4.65640	1.55622	1.5262	1.9958
92600	92191	404.549	-55.121	-48.400	1.56242	4.61382	1.54199	1.5119	1.9770
92800	92389	404.658	-55.012	-48.340	1.54814	4.57165	1.52789	1.4977	1.9584
93000	92587	404.767	-54.903	-48.279	1.53399 + 1	4.52987 - 1	1.51393 - 2	1.4836 - 3	1.9400 - 2
93200	92785	404.876	-54.794	-48.219	1.51997	4.48848	1.50010	1.4686	1.9217
93400	92984	404.984	-54.686	-48.159	1.50609	4.44749	1.48640	1.4558	1.9037
93600	93182	405.093	-54.577	-48.098	1.49234	4.40688	1.47283	1.4421	1.8858
93800	93380	405.202	-54.468	-48.038	1.47872	4.36665	1.45938	1.4286	1.8680
94000	93578	405.311	-54.359	-47.977	1.46522	4.32681	1.44606	1.4152	1.8505
94200	93776	405.419	-54.251	-47.917	1.45186	4.28733	1.43287	1.4019	1.8331
94400	93975	405.528	-54.142	-47.857	1.43862	4.24823	1.41980	1.3887	1.8159
94600	94173	405.637	-54.033	-47.796	1.42550	4.20950	1.40686	1.3757	1.7989
94800	94371	405.746	-53.924	-47.736	1.41251	4.17113	1.39403	1.3628	1.7820
95000	94569	405.854	-53.816	-47.675	1.39963 + 1	4.13312 - 1	1.38133 - 2	1.3500 - 3	1.7653 - 2
95200	94767	405.963	-53.707	-47.615	1.38688	4.09546	1.36875	1.3373	1.7488
95400	94966	406.072	-53.598	-47.555	1.37425	4.05817	1.35628	1.3248	1.7324
95600	95164	406.181	-53.489	-47.494	1.36174	4.02122	1.34393	1.3124	1.7161
95800	95362	406.289	-53.381	-47.434	1.34935	3.98462	1.33170	1.3001	1.7001
96000	95560	406.398	-53.272	-47.373	1.33707	3.94836	1.31958	1.2879	1.6841
96200	95758	406.507	-53.163	-47.313	1.32491	3.91244	1.30758	1.2759	1.6684
96400	95956	406.616	-53.054	-47.252	1.31286	3.87686	1.29569	1.2639	1.6528
96600	96155	406.724	-52.946	-47.192	1.30092	3.84162	1.28391	1.2521	1.6373
96800	96353	406.833	-52.837	-47.132	1.28910	3.80670	1.27224	1.2404	1.6220
97000	96551	406.942	-52.728	-47.071	1.27738 + 1	3.77211 - 1	1.26068 - 2	1.2288 - 3	1.6068 - 2
97200	96749	407.050	-52.620	-47.011	1.26578	3.73784	1.24923	1.2173	1.5918
97400	96947	407.159	-52.511	-46.951	1.25428	3.70390	1.23788	1.2059	1.5769
97600	97145	407.268	-52.402	-46.890	1.24290	3.67027	1.22664	1.1947	1.5622
97800	97343	407.377	-52.293	-46.830	1.23162	3.63696	1.21551	1.1835	1.5476
98000	97542	407.485	-52.185	-46.769	1.22044	3.60396	1.20448	1.1725	1.5331
98200	97740	407.594	-52.076	-46.709	1.20937	3.57127	1.19356	1.1615	1.5188
98400	97938	407.703	-51.967	-46.649	1.19840	3.53888	1.18273	1.1507	1.5046
98600	98136	407.811	-51.859	-46.588	1.18754	3.50680	1.17201	1.1399	1.4906
98800	98334	407.920	-51.750	-46.528	1.17678	3.47502	1.16139	1.1293	1.4767
99000	98532	408.029	-51.641	-46.467	1.16611 + 1	3.44353 - 1	1.15086 - 2	1.1188 - 3	1.4629 - 2
99200	98730	408.137	-51.533	-46.407	1.15555	3.41234	1.14044	1.1083	1.4493
99400	98928	408.246	-51.424	-46.347	1.14509	3.38144	1.13011	1.0980	1.4358
99600	99127	408.355	-51.315	-46.286	1.13472	3.35083	1.11988	1.0878	1.4224
99800	99325	408.463	-51.207	-46.226	1.12445	3.32050	1.10975	1.0776	1.4092
100000	99523	408.572	-51.098	-46.165	1.11428	3.29046	1.09971	1.0676	1.3960
100200	99721	408.681	-50.989	-46.105	1.10420	3.26070	1.08976	1.0577	1.3830
100400	99919	408.790	-50.880	-46.045	1.09421	3.23121	1.07990	1.0478	1.3702
100600	100117	408.898	-50.772	-45.984	1.08432	3.20200	1.07014	1.0381	1.3574
100800	100315	409.007	-50.663	-45.924	1.07452	3.17306	1.06047	1.0284	1.3448
101000	100513	409.116	-50.554	-45.864	1.06481 + 1	3.14439 - 1	1.05089 - 2	1.0189 - 3	1.3323 - 2
101200	100711	409.224	-50.446	-45.803	1.05520	3.11599	1.04140	1.0094	1.3199
101400	100909	409.333	-50.337	-45.743	1.04567	3.08786	1.03199	1.0000	1.3077
101600	101107	409.442	-50.228	-45.682	1.03622	3.05998	1.02268	9.9073 - 4	1.2955
101800	101305	409.550	-50.120	-45.622	1.02688	3.03236	1.01345	9.8152	1.2835
102000	101504	409.659	-50.011	-45.562	1.01761	3.00501	1.00430	9.7241	1.2716
102200	101702	409.768	-49.902	-45.501	1.00843	2.97790	9.95246 - 3	9.6338	1.2597
102400	101900	409.876	-49.794	-45.441	9.99340 + 0	2.95105	9.86272	9.5444	1.2481
102600	102098	409.985	-49.685	-45.381	9.90332	2.92445	9.77381	9.4559	1.2365
102800	102296	410.094	-49.576	-45.320	9.81407	2.89809	9.68574	9.3682	1.2250
103000	102494	410.202	-49.468	-45.260	9.72565 + 0	2.87198 - 1	9.59847 - 3	9.2813 - 4	1.2137 - 2
103200	102692	410.311	-49.359	-45.200	9.63806	2.84612	9.51202	9.1953	1.2024
103400	102890	410.419	-49.251	-45.139	9.55127	2.82049	9.42637	9.1101	1.1913
103600	103088	410.528	-49.142	-45.079	9.46529	2.79510	9.34151	9.0257	1.1802
103800	103286	410.637	-49.033	-45.018	9.38010	2.76994	9.25744	8.9421	1.1693
104000	103484	410.745	-48.925	-44.958	9.29572	2.74502	9.17416	8.8593	1.1585
104200	103682	410.854	-48.816	-44.898	9.21211	2.72033	9.09165	8.7773	1.1477
104400	103880	410.963	-48.707	-44.837	9.12928	2.69587	9.00990	8.6961	1.1371
104600	104078	411.071	-48.599	-44.777	9.04722	2.67164	8.92891	8.6156	1.1266
104800	104276	411.180	-48.490	-44.717	8.96591	2.64763	8.84867	8.5360	1.1162
105000	104474	411.289	-48.381	-44.656	8.88537 + 0	2.62385 - 1	8.76918 - 3	8.4570 - 4	1.1059 - 2
105200	104672	411.398	-48.272	-44.595	8.80484	2.59994	8.68844	8.3764	1.0954
105400	104870	411.507	-48.163	-44.534	8.72431	2.57602	8.60770	8.2957	1.0850
105600	105068	411.616	-48.054	-44.473	8.64378	2.55210	8.52696	8.2150	1.0746
105800	105266	411.725	-47.945	-44.412	8.56325	2.52818	8.44622	8.1343	1.0642
106000	105464	411.834	-47.836	-44.351	8.48272	2.50426	8.36548	8.0536	1.0538
106200	105662	411.943	-47.727	-44.290	8.40219	2.48034	8.28474	7.9729	1.0434
106400	105860	412.052	-47.618	-44.229	8.32166	2.45642	8.20400	7.8922	1.0330
106600	106058	412.161	-47.509	-44.168	8.24113	2.43250	8.12326	7.8115	1.0226
106800	106256	412.270	-47.400	-44.107	8.16060	2.40858	8.04252	7.7308	1.0122
107000	106454	412.379	-47.291	-44.046	8.08007	2.38466	7.96178	7.6501	1.0018
107200	106652	412.488	-47.182	-43.985	8.00000	2.36074	7.88104	7.5694	0.9914
107400	106850	412.597	-47.073	-43.924	7.91993	2.33682	7.80030	7.4887	0.9810
107600	107048	412.706	-46.964	-43.863	7.83986	2.31290	7.71956	7.4080	0.9706
107800	107246	412.815	-46.855	-43.802	7.75979	2.28898	7.63882	7.3273	0.9602
108000	107444	412.924	-46.746	-43.741	7.67972	2.26506	7.55808	7.2466	0.9498
108200	107642	413.033	-46.637	-43.680	7.59965	2.24114	7.47734	7.1659	0.9394
108400	107840	413.142	-46.528	-43.619	7.51958	2.21722	7.39660	7.0852	0.9290
108600	108038	413.251	-46.419	-43.558	7.43951	2.19330	7.31586	7.0045	0.9186
108800	108236	413.360	-46.310	-43.497	7.35944	2.16938	7.23512	6.9238	0.9082
109000	108434	413.469	-46.201	-43.436	7.27937	2.14546	7.15438	6.8431	0.8978
109200	108632	413.578	-46.092	-43.375	7.19930	2.12154	7.07364	6.7624	0.8874
109400	108830	413.687	-45.983	-43.314	7.11923	2.09762	6.99290	6.6817	0.8770
109600	109028	413.796	-45.874	-43.253	7.03916	2.07370	6.91216	6.6010	0.8666
109800	109226	413.905	-45.765	-43.192	6.95909	2.04978	6.83142	6.5203	0.8562
110000	109424	414.014	-45.656	-43.131	6.87902	2.02586	6.75068	6.4396	0.8458

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
110000	110583	419.271	-40.399	-40.222	6.92297 + 0	2.04435 - 1	6.83244 - 3	6.4638 - 4	8.4522 - 3
110500	111089	420.039	-39.631	-39.795	6.77008	1.99920	6.68155	6.3095	8.2505
111000	111594	420.807	-38.863	-39.368	6.62084	1.95513	6.53426	6.1591	8.0539
111500	112099	421.575	-38.095	-38.941	6.47515	1.91211	6.39047	6.0126	7.8623
112000	112605	422.343	-37.327	-38.515	6.33292	1.87011	6.25011	5.8699	7.6756
112500	113110	423.112	-36.558	-38.088	6.19407	1.82911	6.11307	5.7307	7.4937
113000	113616	423.880	-35.790	-37.661	6.05850	1.78908	5.97928	5.5952	7.3164
113500	114121	424.648	-35.022	-37.235	5.92614	1.74999	5.84865	5.4630	7.1436
114000	114627	425.416	-34.254	-36.808	5.79691	1.71183	5.72110	5.3342	6.9752
114500	115132	426.184	-33.486	-36.381	5.67071	1.67456	5.59656	5.2087	6.8111
115000	115638	426.952	-32.718	-35.954	5.54749 + 0	1.63817 - 1	5.47494 - 3	5.0864 - 4	6.6511 - 3
115500	116143	427.720	-31.950	-35.528	5.42715	1.60264	5.35618	4.9671	6.4951
116000	116649	428.488	-31.182	-35.101	5.30964	1.56793	5.24020	4.8508	6.3431
116500	117155	429.256	-30.414	-34.674	5.19487	1.53404	5.12694	4.7375	6.1949
117000	117660	430.024	-29.646	-34.248	5.08278	1.50094	5.01631	4.6270	6.0504
117500	118166	430.793	-28.877	-33.821	4.97331	1.46862	4.90827	4.5193	5.9095
118000	118672	431.561	-28.109	-33.394	4.86638	1.43704	4.80274	4.4142	5.7722
118500	119177	432.329	-27.341	-32.967	4.76193	1.40620	4.69966	4.3118	5.6382
119000	119683	433.097	-26.573	-32.541	4.65991	1.37607	4.59897	4.2119	5.5077
119500	120189	433.865	-25.805	-32.114	4.56024	1.34664	4.50061	4.1146	5.3803
120000	120695	434.633	-25.037	-31.687	4.46288 + 0	1.31789 - 1	4.40452 - 3	4.0196 - 4	5.2561 - 3
120500	121200	435.401	-24.269	-31.260	4.36776	1.28980	4.31065	3.9270	5.1350
121000	121706	436.169	-23.501	-30.834	4.27484	1.26236	4.21894	3.8367	5.0169
121500	122212	436.937	-22.733	-30.407	4.18405	1.23555	4.12933	3.7486	4.9018
122000	122718	437.705	-21.965	-29.980	4.09534	1.20935	4.04178	3.6627	4.7894
122500	123224	438.474	-21.196	-29.554	4.00866	1.18376	3.95624	3.5789	4.6798
123000	123730	439.242	-20.428	-29.127	3.92396	1.15875	3.87265	3.4971	4.5729
123500	124236	440.010	-19.660	-28.700	3.84120	1.13431	3.79097	3.4174	4.4687
124000	124742	440.778	-18.892	-28.273	3.76032	1.11042	3.71115	3.3396	4.3670
124500	125248	441.546	-18.124	-27.847	3.68128	1.08708	3.63314	3.2637	4.2677
125000	125754	442.314	-17.356	-27.420	3.60404 + 0	1.06427 - 1	3.55691 - 3	3.1897 - 4	4.1709 - 3
125500	126260	443.082	-16.588	-26.993	3.52855	1.04198	3.48240	3.1175	4.0765
126000	126766	443.850	-15.820	-26.567	3.45476	1.02019	3.40958	3.0470	3.9843
126500	127272	444.618	-15.052	-26.140	3.38264	9.98894 - 2	3.33841	2.9782	3.8944
127000	127778	445.386	-14.284	-25.713	3.31215	9.78077	3.26884	2.9111	3.8067
127500	128284	446.154	-13.516	-25.286	3.24324	9.57729	3.20083	2.8457	3.7211
128000	128791	446.923	-12.747	-24.860	3.17589	9.37838	3.13435	2.7818	3.6375
128500	129297	447.691	-11.979	-24.433	3.11004	9.18394	3.06937	2.7194	3.5560
129000	129803	448.459	-11.211	-24.006	3.04567	8.99385	3.00584	2.6586	3.4764
129500	130309	449.227	-10.443	-23.580	2.98273	8.80801	2.94373	2.5992	3.3988
130000	130816	449.995	-9.675	-23.153	2.92120 + 0	8.62631 - 2	2.88300 - 3	2.5412 - 4	3.3230 - 3
130500	131322	450.763	-8.907	-22.726	2.86105	8.44867	2.82363	2.4847	3.2490
131000	131828	451.531	-8.139	-22.299	2.80223	8.27498	2.76558	2.4294	3.1768
131500	132335	452.299	-7.371	-21.873	2.74471	8.10514	2.70882	2.3755	3.1063
132000	132841	453.067	-6.603	-21.446	2.68848	7.93907	2.65332	2.3229	3.0375
132500	133347	453.835	-5.835	-21.019	2.63348	7.77667	2.59905	2.2715	2.9703
133000	133854	454.604	-5.066	-20.592	2.57970	7.61786	2.54597	2.2214	2.9048
133500	134360	455.372	-4.298	-20.166	2.52711	7.46256	2.49407	2.1724	2.8408
134000	134867	456.140	-3.530	-19.739	2.47568	7.31067	2.44330	2.1246	2.7782
134500	135373	456.908	-2.762	-19.312	2.42537	7.16213	2.39366	2.0780	2.7172
135000	135880	457.676	-1.994	-18.886	2.37618 + 0	7.01684 - 2	2.34510 - 3	2.0324 - 4	2.6576 - 3
135500	136386	458.444	-1.226	-18.459	2.32805	6.87474	2.29761	1.9879	2.5994
136000	136893	459.212	-0.458	-18.032	2.28099	6.73575	2.25116	1.9445	2.5426
136500	137399	459.980	0.310	-17.605	2.23494	6.59979	2.20572	1.9020	2.4872
137000	137906	460.748	1.078	-17.179	2.18991	6.46680	2.16127	1.8606	2.4330
137500	138413	461.516	1.846	-16.752	2.14585	6.33670	2.11779	1.8201	2.3801
138000	138919	462.284	2.614	-16.325	2.10275	6.20942	2.07525	1.7806	2.3284
138500	139426	463.053	3.383	-15.899	2.06059	6.08491	2.03364	1.7420	2.2779
139000	139933	463.821	4.151	-15.472	2.01934	5.96310	1.99293	1.7043	2.2286
139500	140440	464.589	4.919	-15.045	1.97898	5.84392	1.95310	1.6675	2.1805
140000	140946	465.357	5.687	-14.618	1.93949 + 0	5.72731 - 2	1.91413 - 3	1.6315 - 4	2.1334 - 3
140500	141453	466.125	6.455	-14.192	1.90085	5.61322	1.87600	1.5964	2.0875
141000	141960	466.893	7.223	-13.765	1.86305	5.50158	1.83869	1.5621	2.0426
141500	142467	467.661	7.991	-13.338	1.82606	5.39234	1.80218	1.5285	1.9987
142000	142974	468.429	8.759	-12.912	1.78986	5.28544	1.76645	1.4958	1.9559
142500	143480	469.197	9.527	-12.485	1.75443	5.18084	1.73149	1.4638	1.9141
143000	143987	469.965	10.295	-12.058	1.71977	5.07846	1.69728	1.4325	1.8732
143500	144494	470.734	11.064	-11.631	1.68584	4.97828	1.66379	1.4019	1.8332
144000	145001	471.502	11.832	-11.205	1.65263	4.88023	1.63102	1.3721	1.7942
144500	145508	472.270	12.600	-10.778	1.62014	4.78426	1.59895	1.3429	1.7560
145000	146015	473.038	13.368	-10.351	1.58833 + 0	4.69033 - 2	1.56756 - 3	1.3144 - 4	1.7188 - 3
145500	146522	473.806	14.136	-9.924	1.55720	4.59840	1.53683	1.2866	1.6824
146000	147029	474.574	14.904	-9.498	1.52672	4.50841	1.50676	1.2593	1.6468
146500	147537	475.342	15.672	-9.071	1.49689	4.42033	1.47732	1.2327	1.6120
147000	148044	476.110	16.440	-8.644	1.46769	4.33410	1.44850	1.2068	1.5780
147500	148551	476.878	17.208	-8.218	1.43911	4.24969	1.42029	1.1813	1.5448
148000	149058	477.646	17.976	-7.791	1.41113	4.16705	1.39267	1.1565	1.5123
148500	149565	478.414	18.745	-7.364	1.38373	4.08616	1.36564	1.1322	1.4805
149000	150072	479.183	19.513	-6.937	1.35691	4.00695	1.33917	1.1085	1.4495
149500	150580	479.951	20.281	-6.511	1.33065	3.92941	1.31325	1.0853	1.4192

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
110000	109423	418.384	-41.286	-40.714	7.10413 + 0	2.09785 - 1	7.01123 - 3	6.6470 - 4	8.6918 - 3
110500	109918	419.144	-40.526	-40.292	6.94854	2.05190	6.85768	6.4896	8.4860
111000	110412	419.904	-39.766	-39.870	6.79664	2.00705	6.70776	6.3363	8.2855
111500	110907	420.664	-39.006	-39.448	6.64833	1.96325	6.56139	6.1868	8.0901
112000	111402	421.424	-38.246	-39.025	6.50353	1.92049	6.41848	6.0411	7.8996
112500	111896	422.184	-37.486	-38.603	6.36213	1.87874	6.27894	5.8992	7.7139
113000	112391	422.944	-36.726	-38.181	6.22407	1.83797	6.14268	5.7608	7.5330
113500	112886	423.704	-35.966	-37.759	6.08924	1.79815	6.00962	5.6259	7.3566
114000	113380	424.464	-35.206	-37.337	5.95758	1.75927	5.87967	5.4944	7.1846
114500	113875	425.223	-34.447	-36.915	5.82900	1.72130	5.75277	5.3662	7.0170
115000	114369	425.983	-33.687	-36.493	5.70342 + 0	1.68422 - 1	5.62884 - 3	5.2412 - 4	6.8536 - 3
115500	114864	426.743	-32.927	-36.071	5.58077	1.64800	5.50779	5.1194	6.6943
116000	115358	427.502	-32.168	-35.649	5.46097	1.61262	5.38956	5.0006	6.5389
116500	115853	428.262	-31.408	-35.227	5.34395	1.57807	5.27407	4.8848	6.3875
117000	116347	429.022	-30.648	-34.805	5.22965	1.54432	5.16127	4.7718	6.2398
117500	116842	429.781	-29.889	-34.383	5.11800	1.51134	5.05107	4.6617	6.0958
118000	117336	430.541	-29.129	-33.961	5.00892	1.47913	4.94342	4.5543	5.9553
118500	117830	431.300	-28.370	-33.539	4.90237	1.44767	4.83826	4.4495	5.8184
119000	118325	432.060	-27.610	-33.117	4.79826	1.41693	4.73551	4.3474	5.6848
119500	118819	432.819	-26.851	-32.695	4.69655	1.38689	4.63513	4.2478	5.5545
120000	119313	433.578	-26.092	-32.273	4.59717 + 0	1.35754 - 1	4.53705 - 3	4.1506 - 4	5.4275 - 3
120500	119808	434.338	-25.332	-31.851	4.50006	1.32887	4.44122	4.0558	5.3035
121000	120302	435.097	-24.573	-31.430	4.40518	1.30085	4.34757	3.9634	5.1827
121500	120796	435.856	-23.814	-31.008	4.31246	1.27347	4.25607	3.8732	5.0647
122000	121290	436.615	-23.055	-30.586	4.22185	1.24671	4.16664	3.7852	4.9497
122500	121785	437.374	-22.296	-30.164	4.13331	1.22056	4.07926	3.6994	4.8375
123000	122279	438.134	-21.536	-29.742	4.04677	1.19501	3.99385	3.6157	4.7280
123500	122773	438.893	-20.777	-29.321	3.96219	1.17004	3.91038	3.5340	4.6212
124000	123267	439.652	-20.018	-28.899	3.87953	1.14562	3.82880	3.4543	4.5169
124500	123761	440.411	-19.259	-28.477	3.79874	1.12177	3.74906	3.3765	4.4153
125000	124255	441.170	-18.500	-28.056	3.71976 + 0	1.09844 - 1	3.67112 - 3	3.3006 - 4	4.3160 - 3
125500	124749	441.929	-17.741	-27.634	3.64256	1.07565	3.59493	3.2266	4.2192
126000	125243	442.688	-16.982	-27.212	3.56710	1.05336	3.52045	3.1543	4.1247
126500	125737	443.447	-16.223	-26.791	3.49333	1.03158	3.44765	3.0838	4.0325
127000	126231	444.205	-15.465	-26.369	3.42121	1.01028	3.37647	3.0150	3.9425
127500	126725	444.964	-14.706	-25.948	3.35070	9.89461 - 2	3.30688	2.9478	3.8546
128000	127219	445.723	-13.947	-25.526	3.28176	9.69104	3.23885	2.8823	3.7689
128500	127713	446.482	-13.188	-25.105	3.21436	9.49201	3.17233	2.8183	3.6852
129000	128207	447.240	-12.430	-24.683	3.14846	9.29740	3.10729	2.7558	3.6036
129500	128701	447.999	-11.671	-24.262	3.08402	9.10710	3.04369	2.6948	3.5238
130000	129195	448.758	-10.912	-23.840	3.02101 + 0	8.92103 - 2	2.98150 - 3	2.6353 - 4	3.4460 - 3
130500	129689	449.516	-10.154	-23.419	2.95939	8.73907	2.92069	2.5772	3.3700
131000	130182	450.275	-9.395	-22.997	2.89913	8.56113	2.86122	2.5205	3.2958
131500	130676	451.033	-8.637	-22.576	2.84020	8.38710	2.80306	2.4651	3.2234
132000	131170	451.792	-7.878	-22.155	2.78257	8.21691	2.74618	2.4110	3.1527
132500	131663	452.550	-7.120	-21.733	2.72620	8.05046	2.69055	2.3582	3.0837
133000	132157	453.309	-6.361	-21.312	2.67107	7.88765	2.63614	2.3066	3.0162
133500	132651	454.067	-5.603	-20.891	2.61714	7.72841	2.58292	2.2563	2.9504
134000	133144	454.825	-4.845	-20.469	2.56439	7.57265	2.53086	2.2071	2.8861
134500	133638	455.584	-4.086	-20.048	2.51280	7.42029	2.47994	2.1591	2.8233
135000	134132	456.342	-3.328	-19.627	2.46233 + 0	7.27125 - 2	2.43013 - 3	2.1122 - 4	2.7620 - 3
135500	134625	457.100	-2.570	-19.205	2.41295	7.12544	2.38140	2.0665	2.7022
136000	135119	457.858	-1.812	-18.784	2.36465	6.98280	2.33373	2.0217	2.6437
136500	135612	458.617	-1.053	-18.363	2.31739	6.84326	2.28709	1.9781	2.5866
137000	136106	459.375	-0.295	-17.942	2.27116	6.70673	2.24146	1.9354	2.5308
137500	136599	460.133	0.463	-17.521	2.22592	6.57315	2.19682	1.8937	2.4763
138000	137093	460.891	1.221	-17.100	2.18166	6.44245	2.15313	1.8530	2.4231
138500	137586	461.649	1.979	-16.678	2.13836	6.31456	2.11039	1.8133	2.3711
139000	138080	462.407	2.737	-16.257	2.09598	6.18694	2.06857	1.7744	2.3203
139500	138573	463.165	3.495	-15.836	2.05451	6.06697	2.02764	1.7365	2.2706
140000	139066	463.923	4.253	-15.415	2.01393 + 0	5.94714 - 2	1.98760 - 3	1.6994 - 4	2.2222 - 3
140500	139560	464.680	5.010	-14.994	1.97422	5.82987	1.94840	1.6631	2.1748
141000	140053	465.438	5.768	-14.573	1.93536	5.71510	1.91005	1.6278	2.1285
141500	140546	466.196	6.526	-14.152	1.89732	5.60278	1.87251	1.5932	2.0833
142000	141040	466.954	7.284	-13.731	1.86009	5.49285	1.83577	1.5594	2.0391
142500	141533	467.712	8.042	-13.310	1.82366	5.38526	1.79981	1.5264	1.9959
143000	142026	468.469	8.799	-12.889	1.78799	5.27994	1.76461	1.4941	1.9537
143500	142519	469.227	9.557	-12.468	1.75308	5.17686	1.73016	1.4625	1.9125
144000	143012	469.985	10.315	-12.047	1.71891	5.07595	1.69644	1.4317	1.8722
144500	143506	470.742	11.072	-11.627	1.68546	4.97718	1.66342	1.4016	1.8328
145000	143999	471.500	11.830	-11.206	1.65272 + 0	4.88048 - 2	1.63111 - 3	1.3722 - 4	1.7943 - 3
145500	144492	472.257	12.587	-10.785	1.62066	4.78582	1.59947	1.3434	1.7567
146000	144985	473.015	13.345	-10.364	1.58928	4.69314	1.56850	1.3153	1.7199
146500	145478	473.772	14.102	-9.943	1.55856	4.60241	1.53818	1.2878	1.6839
147000	145971	474.529	14.859	-9.523	1.52847	4.51358	1.50849	1.2609	1.6488
147500	146464	475.287	15.617	-9.102	1.49902	4.42661	1.47942	1.2346	1.6145
148000	146957	476.044	16.374	-8.681	1.47018	4.34144	1.45096	1.2090	1.5809
148500	147450	476.801	17.131	-8.260	1.44194	4.25806	1.42309	1.1839	1.5481
149000	147943	477.559	17.889	-7.840	1.41429	4.17640	1.39580	1.1593	1.5160
149500	148436	478.316	18.646	-7.419	1.38722	4.09645	1.36908	1.1353	1.4846

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
150000	151087	480.719	21.049	-6.084	1.30494 + 0	3.85349 - 2	1.28788 - 3	1.0626 - 4	1.3896 - 3
150500	151594	481.487	21.817	-5.657	1.27977	3.77915	1.26303	1.0405	1.3606
151000	152101	482.255	22.585	-5.231	1.25512	3.70636	1.23871	1.0188	1.3322
151500	152609	483.023	23.353	-4.804	1.23098	3.63509	1.21488	9.9764 - 5	1.3045
152000	153116	483.791	24.121	-4.377	1.20735	3.56529	1.19156	9.7693	1.2775
152500	153623	484.559	24.889	-3.950	1.18420	3.49695	1.16872	9.5668	1.2510
153000	154131	485.327	25.657	-3.524	1.16154	3.43002	1.14635	9.3689	1.2251
153500	154638	486.095	26.425	-3.097	1.13934	3.36447	1.12444	9.1753	1.1998
154000	155146	486.864	27.194	-2.670	1.11760	3.30028	1.10299	8.9861	1.1750
154500	155653	487.170	27.500	-2.500	1.09631	3.23739	1.08197	8.8093	1.1519
155000	156161	487.170	27.500	-2.500	1.07542 + 0	3.17571 - 2	1.06135 - 3	8.6414 - 5	1.1300 - 3
155500	156668	487.170	27.500	-2.500	1.05493	3.11520	1.04113	8.4768	1.1085
156000	157176	487.170	27.500	-2.500	1.03483	3.05584	1.02130	8.3153	1.0873
156500	157683	487.170	27.500	-2.500	1.01511	2.99762	1.00184	8.1569	1.0666
157000	158191	487.170	27.500	-2.500	9.95770 - 1	2.94051	9.82749 - 4	8.0014	1.0463
157500	158699	487.170	27.500	-2.500	9.76797	2.88448	9.64024	7.8490	1.0264
158000	159206	487.170	27.500	-2.500	9.58186	2.82952	9.45656	7.6994	1.0068
158500	159714	487.170	27.500	-2.500	9.39930	2.77561	9.27639	7.5527	9.8762 - 4
159000	160222	487.170	27.500	-2.500	9.22021	2.72273	9.09964	7.4088	9.6880
159500	160729	487.170	27.500	-2.500	9.04454	2.67085	8.92627	7.2677	9.5034
160000	161237	487.170	27.500	-2.500	8.87222 - 1	2.61996 - 2	8.75620 - 4	7.1292 - 5	9.3224 - 4
160500	161745	487.170	27.500	-2.500	8.70317	2.57005	8.58936	6.9934	9.1447
161000	162253	487.170	27.500	-2.500	8.53735	2.52108	8.42571	6.8601	8.9705
161500	162761	487.170	27.500	-2.500	8.37469	2.47304	8.26517	6.7294	8.7996
162000	163268	487.170	27.500	-2.500	8.21512	2.42592	8.10770	6.6012	8.6319
162500	163776	487.170	27.500	-2.500	8.05860	2.37970	7.95322	6.4754	8.4675
163000	164284	487.170	27.500	-2.500	7.90506	2.33436	7.80169	6.3521	8.3061
163500	164792	487.170	27.500	-2.500	7.75444	2.28989	7.65304	6.2310	8.1479
164000	165300	487.170	27.500	-2.500	7.60670	2.24626	7.50723	6.1123	7.9926
164500	165808	487.170	27.500	-2.500	7.46177	2.20346	7.36419	5.9959	7.8404
165000	166316	487.170	27.500	-2.500	7.31960 - 1	2.16148 - 2	7.22388 - 4	5.8816 - 5	7.6910 - 4
165500	166824	487.170	27.500	-2.500	7.18014	2.12029	7.08624	5.7696	7.5444
166000	167332	487.170	27.500	-2.500	7.04333	2.07989	6.95123	5.6596	7.4007
166500	167840	487.170	27.500	-2.500	6.90913	2.04027	6.81879	5.5518	7.2597
167000	168348	487.170	27.500	-2.500	6.77749	2.00139	6.68887	5.4460	7.1214
167500	168856	487.170	27.500	-2.500	6.64836	1.96326	6.56142	5.3422	6.9857
168000	169364	487.170	27.500	-2.500	6.52169	1.92585	6.43641	5.2405	6.8526
168500	169873	487.170	27.500	-2.500	6.39743	1.88916	6.31377	5.1406	6.7220
169000	170381	487.170	27.500	-2.500	6.27554	1.85317	6.19348	5.0427	6.5939
169500	170889	487.170	27.500	-2.500	6.15597	1.81786	6.07547	4.9466	6.4683
170000	171397	487.170	27.500	-2.500	6.03868 - 1	1.78322 - 2	5.95972 - 4	4.8523 - 5	6.3451 - 4
170500	171906	487.170	27.500	-2.500	5.92363	1.74925	5.84617	4.7599	6.2242
171000	172414	486.735	27.065	-2.742	5.81072	1.71591	5.73474	4.6733	6.1110
171500	172922	486.186	26.516	-3.046	5.69985	1.68316	5.62531	4.5893	6.0012
172000	173431	485.638	25.968	-3.351	5.59097	1.65101	5.51786	4.5068	5.8932
172500	173939	485.089	25.419	-3.656	5.48405	1.61944	5.41234	4.4256	5.7870
173000	174447	484.541	24.871	-3.961	5.37906	1.58844	5.30872	4.3458	5.6827
173500	174956	483.992	24.322	-4.266	5.27597	1.55799	5.20697	4.2673	5.5801
174000	175464	483.443	23.773	-4.570	5.17473	1.52810	5.10706	4.1902	5.4792
174500	175973	482.895	23.225	-4.875	5.07533	1.49874	5.00896	4.1144	5.3801
175000	176481	482.346	22.676	-5.180	4.97772 - 1	1.46992 - 2	4.91263 - 4	4.0398 - 5	5.2826 - 4
175500	176990	481.797	22.127	-5.485	4.88189	1.44162	4.81805	3.9666	5.1868
176000	177498	481.249	21.579	-5.790	4.78779	1.41384	4.72519	3.8945	5.0926
176500	178007	480.700	21.030	-6.094	4.69541	1.38655	4.63401	3.8237	5.0000
177000	178515	480.151	20.481	-6.399	4.60470	1.35977	4.54449	3.7542	4.9091
177500	179024	479.603	19.933	-6.704	4.51565	1.33347	4.45660	3.6858	4.8196
178000	179533	479.054	19.384	-7.009	4.42822	1.30765	4.37031	3.6185	4.7317
178500	180041	478.506	18.836	-7.314	4.34238	1.28231	4.28560	3.5525	4.6453
179000	180550	477.957	18.287	-7.618	4.25812	1.25742	4.20243	3.4875	4.5604
179500	181059	477.408	17.738	-7.923	4.17539	1.23299	4.12079	3.4237	4.4769
180000	181567	476.860	17.190	-8.228	4.09418 - 1	1.20901 - 2	4.04064 - 4	3.3610 - 5	4.3949 - 4
180500	182076	476.311	16.641	-8.533	4.01446	1.18547	3.96196	3.2993	4.3143
181000	182585	475.762	16.092	-8.838	3.93620	1.16236	3.88472	3.2387	4.2351
181500	183094	475.214	15.544	-9.142	3.85938	1.13967	3.80891	3.1792	4.1572
182000	183602	474.665	14.995	-9.447	3.78397	1.11741	3.73449	3.1207	4.0807
182500	184111	474.116	14.446	-9.752	3.70995	1.09555	3.66144	3.0632	4.0055
183000	184620	473.568	13.898	-10.057	3.63730	1.07409	3.58973	3.0067	3.9316
183500	185129	473.019	13.349	-10.362	3.56598	1.05303	3.51935	2.9511	3.8590
184000	185638	472.470	12.800	-10.666	3.49599	1.03236	3.45027	2.8966	3.7876
184500	186147	471.922	12.252	-10.971	3.42728	1.01208	3.38247	2.8430	3.7175
185000	186656	471.373	11.703	-11.276	3.35986 - 1	9.92165 - 3	3.31592 - 4	2.7903 - 5	3.6486 - 4
185500	187165	470.825	11.155	-11.581	3.29368	9.72623	3.25061	2.7385	3.5809
186000	187674	470.276	10.606	-11.886	3.22873	9.53444	3.18651	2.6876	3.5144
186500	188183	469.727	10.057	-12.190	3.16499	9.34620	3.12360	2.6376	3.4491
187000	188692	469.179	9.509	-12.495	3.10243	9.16148	3.06186	2.5885	3.3848
187500	189201	468.630	8.960	-12.800	3.04104	8.98019	3.00127	2.5403	3.3217
188000	189710	468.081	8.411	-13.105	2.98080	8.80229	2.94182	2.4929	3.2598
188500	190220	467.533	7.863	-13.410	2.92168	8.62770	2.88347	2.4463	3.1989
189000	190729	466.984	7.314	-13.714	2.86366	8.45638	2.82621	2.4005	3.1390
189500	191238	466.435	6.765	-14.019	2.80673	8.28827	2.77003	2.3556	3.0802

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
150000	148929	479.073	19.403	-6.998	1.36070 + 0	4.01815 - 2	1.34291 - 3	1.1119 - 4	1.4539 - 3
150500	149422	479.830	20.160	-6.578	1.33473	3.94146	1.31728	1.0889	1.4239
151000	149914	480.587	20.917	-6.157	1.30930	3.86637	1.29218	1.0665	1.3946
151500	150407	481.344	21.674	-5.736	1.28440	3.79282	1.26760	1.0446	1.3659
152000	150900	482.101	22.431	-5.316	1.26000	3.72079	1.24353	1.0231	1.3379
152500	151393	482.858	23.188	-4.895	1.23611	3.65024	1.21995	1.0021	1.3104
153000	151886	483.615	23.945	-4.475	1.21271	3.58114	1.19685	9.8163 - 5	1.2836
153500	152378	484.372	24.702	-4.054	1.18979	3.51345	1.17423	9.6157	1.2574
154000	152871	485.129	25.459	-3.634	1.16734	3.44715	1.15207	9.4195	1.2317
154500	153364	485.886	26.216	-3.213	1.14535	3.38220	1.13037	9.2277	1.2066
155000	153856	486.643	26.973	-2.793	1.12380 + 0	3.31858 - 2	1.10910 - 3	9.0400 - 5	1.1821 - 3
155500	154349	487.400	27.730	-2.500	1.10269	3.25625	1.08827	8.8606	1.1586
156000	154842	488.157	28.487	-2.500	1.08199	3.19512	1.06784	8.6943	1.1369
156500	155334	488.914	29.244	-2.500	1.06168	3.13513	1.04779	8.5310	1.1155
157000	155827	489.671	29.999	-2.500	1.04175	3.07628	1.02812	8.3709	1.0946
157500	156319	490.428	30.756	-2.500	1.02219	3.01853	1.00883	8.2138	1.0741
158000	156812	491.185	31.513	-2.500	1.00300	2.96187	9.89889 - 4	8.0596	1.0539
158500	157304	491.942	32.270	-2.500	9.84179 - 1	2.90628	9.71309	7.9083	1.0341
159000	157797	492.699	33.027	-2.500	9.65707	2.85173	9.53078	7.7599	1.0147
159500	158289	493.456	33.784	-2.500	9.47582	2.79821	9.35191	7.6142	9.9566 - 4
160000	158782	494.213	34.541	-2.500	9.29799 - 1	2.74569 - 2	9.17640 - 4	7.4713 - 5	9.7697 - 4
160500	159274	494.970	35.298	-2.500	9.12350	2.69417	9.00419	7.3311	9.5864
161000	159766	495.727	36.055	-2.500	8.95229	2.64361	8.83523	7.1936	9.4065
161500	160259	496.484	36.812	-2.500	8.78431	2.59400	8.66944	7.0586	9.2300
162000	160751	497.241	37.569	-2.500	8.61948	2.54533	8.50677	6.9261	9.0568
162500	161243	498.000	38.326	-2.500	8.45776	2.49757	8.34716	6.7962	8.8869
163000	161736	498.757	39.083	-2.500	8.29907	2.45071	8.19055	6.6687	8.7201
163500	162228	499.514	39.840	-2.500	8.14337	2.40474	8.03688	6.5436	8.5565
164000	162720	500.271	40.597	-2.500	7.99060	2.35962	7.88611	6.4208	8.3960
164500	163212	501.028	41.354	-2.500	7.84071	2.31536	7.73817	6.3003	8.2385
165000	163705	501.785	42.111	-2.500	7.69363 - 1	2.27193 - 2	7.59302 - 4	6.1822 - 5	8.0840 - 4
165500	164197	502.542	42.868	-2.500	7.54931	2.22931	7.45059	6.0662	7.9323
166000	164689	503.300	43.625	-2.500	7.40771	2.18750	7.31085	5.9524	7.7836
166500	165181	504.057	44.382	-2.500	7.26878	2.14647	7.17373	5.8408	7.6376
167000	165673	504.814	45.139	-2.500	7.13245	2.10621	7.03918	5.7312	7.4943
167500	166165	505.571	45.896	-2.500	6.99869	2.06671	6.90717	5.6238	7.3538
168000	166657	506.328	46.653	-2.500	6.86744	2.02796	6.77764	5.5183	7.2159
168500	167149	507.085	47.410	-2.500	6.73866	1.98993	6.65054	5.4148	7.0806
169000	167641	507.842	48.167	-2.500	6.61231	1.95261	6.52584	5.3133	6.9478
169500	168133	508.600	48.924	-2.500	6.48832	1.91600	6.40348	5.2136	6.8175
170000	168625	509.357	49.681	-2.500	6.36667 - 1	1.88008 - 2	6.28341 - 4	5.1159 - 5	6.6897 - 4
170500	169117	510.114	50.438	-2.500	6.24730	1.84483	6.16561	5.0200	6.5643
171000	169609	510.871	51.195	-2.500	6.13018	1.81024	6.05002	4.9259	6.4412
171500	170101	511.628	51.952	-2.500	6.01526	1.77631	5.93660	4.8335	6.3205
172000	170593	512.385	52.709	-2.500	5.90250	1.74301	5.82531	4.7429	6.2020
172500	171085	513.142	53.466	-2.793	5.79179	1.71032	5.71606	4.6590	6.0923
173000	171577	513.900	54.223	-3.093	5.68305	1.67821	5.60874	4.5766	5.9845
173500	172068	514.657	54.980	-3.393	5.57624	1.64666	5.50333	4.4956	5.8786
174000	172560	515.414	55.737	-3.693	5.47133	1.61568	5.39978	4.4159	5.7744
174500	173052	516.171	56.494	-3.992	5.36828	1.58525	5.29809	4.3376	5.6719
175000	173544	516.928	57.251	-4.292	5.26707 - 1	1.55537 - 2	5.19819 - 4	4.2605 - 5	5.5712 - 4
175500	174035	517.685	58.008	-4.592	5.16766	1.52601	5.10008	4.1848	5.4721
176000	174527	518.442	58.765	-4.892	5.07002	1.49718	5.00372	4.1103	5.3748
176500	175019	519.200	59.522	-5.191	4.97413	1.46886	4.90908	4.0371	5.2790
177000	175511	519.957	60.279	-5.491	4.87995	1.44105	4.81613	3.9651	5.1848
177500	176002	520.714	61.036	-5.791	4.78745	1.41373	4.72485	3.8943	5.0923
178000	176493	521.471	61.793	-6.090	4.69661	1.38691	4.63520	3.8247	5.0013
178500	176985	522.228	62.550	-6.390	4.60740	1.36057	4.54715	3.7562	4.9118
179000	177477	522.985	63.307	-6.690	4.51979	1.33469	4.46069	3.6890	4.8238
179500	177968	523.742	64.064	-6.989	4.43376	1.30929	4.37578	3.6228	4.7373
180000	178460	524.500	64.821	-7.289	4.34927 - 1	1.28434 - 2	4.29240 - 4	3.5578 - 5	4.6523 - 4
180500	178951	525.257	65.578	-7.589	4.26631	1.25984	4.21052	3.4939	4.5687
181000	179442	526.014	66.335	-7.888	4.18484	1.23578	4.13011	3.4310	4.4865
181500	179934	526.771	67.092	-8.188	4.10484	1.21216	4.05116	3.3692	4.4057
182000	180425	527.528	67.849	-8.487	4.02628	1.18896	3.97363	3.3085	4.3263
182500	180917	528.285	68.606	-8.787	3.94915	1.16618	3.89751	3.2488	4.2482
183000	181408	529.042	69.363	-9.086	3.87341	1.14382	3.82276	3.1901	4.1714
183500	181899	529.800	70.120	-9.386	3.79904	1.12186	3.74936	3.1324	4.0960
184000	182391	530.557	70.877	-9.685	3.72603	1.10030	3.67730	3.0757	4.0218
184500	182882	531.314	71.634	-9.985	3.65434	1.07913	3.60655	3.0199	3.9490
185000	183373	532.071	72.391	-10.284	3.58395 - 1	1.05834 - 2	3.53708 - 4	2.9651 - 5	3.8773 - 4
185500	183864	532.828	73.148	-10.584	3.51484	1.03793	3.46888	2.9113	3.8069
186000	184356	533.585	73.905	-10.883	3.44700	1.01790	3.40192	2.8583	3.7377
186500	184847	534.342	74.662	-11.183	3.38039	9.98228 - 3	3.33618	2.8063	3.6696
187000	185338	535.100	75.419	-11.482	3.31499	9.78917	3.27165	2.7552	3.6028
187500	185829	535.857	76.176	-11.781	3.25080	9.59960	3.20829	2.7049	3.5370
188000	186320	536.614	76.933	-12.081	3.18777	9.41349	3.14609	2.6555	3.4724
188500	186811	537.371	77.690	-12.380	3.12590	9.23079	3.08503	2.6070	3.4089
189000	187302	538.128	78.447	-12.680	3.06517	9.05145	3.02509	2.5593	3.3466
189500	187793	538.885	79.204	-12.979	3.00555	8.87539	2.96625	2.5124	3.2852



TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
190000	191747	465.887	6.217	-14.324	2.75087 - 1	8.12331 - 3	2.71489 - 4	2.3114 - 5	3.0225 - 4
190500	192256	465.338	5.668	-14.629	2.69605	7.96144	2.66080	2.2680	2.9657
191000	192766	464.790	5.120	-14.934	2.64227	7.80261	2.60771	2.2254	2.9100
191500	193275	464.241	4.571	-15.238	2.58949	7.64677	2.55563	2.1835	2.8553
192000	193784	463.692	4.022	-15.543	2.53771	7.49386	2.50453	2.1424	2.8015
192500	194294	463.144	3.474	-15.848	2.48691	7.34384	2.45439	2.1020	2.7486
193000	194803	462.595	2.925	-16.153	2.43706	7.19664	2.40519	2.0623	2.6967
193500	195312	462.046	2.376	-16.458	2.38816	7.05223	2.35693	2.0233	2.6458
194000	195822	461.498	1.828	-16.762	2.34018	6.91054	2.30958	1.9850	2.5957
194500	196331	460.949	1.279	-17.067	2.29311	6.77155	2.26312	1.9474	2.5465
195000	196841	460.400	0.730	-17.372	2.24693 - 1	6.63518 - 3	2.21755 - 4	1.9105 - 5	2.4982 - 4
195500	197350	459.852	0.182	-17.677	2.20163	6.50141	2.17284	1.8742	2.4508
196000	197860	459.303	-0.367	-17.982	2.15719	6.37017	2.12898	1.8386	2.4042
196500	198369	458.754	-0.916	-18.286	2.11359	6.24144	2.08595	1.8036	2.3584
197000	198879	458.206	-1.464	-18.591	2.07083	6.11515	2.04375	1.7692	2.3134
197500	199388	457.657	-2.013	-18.896	2.02888	5.99128	2.00235	1.7354	2.2693
198000	199898	457.109	-2.561	-19.201	1.98773	5.86977	1.96174	1.7023	2.2259
198500	200408	456.560	-3.110	-19.506	1.94737	5.75058	1.92190	1.6697	2.1834
199000	200917	456.011	-3.659	-19.810	1.90778	5.63367	1.88283	1.6377	2.1415
199500	201427	455.463	-4.207	-20.115	1.86895	5.51901	1.84451	1.6063	2.1005
200000	201937	454.914	-4.756	-20.420	1.83086 - 1	5.40654 - 3	1.80692 - 4	1.5755 - 5	2.0602 - 4
200500	202447	454.366	-5.305	-20.725	1.79350	5.29620	1.77004	1.5466	2.0224
201000	202956	453.817	-5.854	-21.030	1.75681	5.18785	1.73383	1.5186	1.9858
201500	203466	453.268	-6.403	-21.335	1.72078	5.08147	1.69828	1.4911	1.9498
202000	203976	452.719	-6.952	-21.640	1.68541	4.97702	1.66337	1.4640	1.9144
202500	204486	452.170	-7.501	-21.945	1.65068	4.87446	1.62910	1.4373	1.8795
203000	204996	451.621	-8.050	-22.250	1.61659	4.77378	1.59545	1.4111	1.8452
203500	205506	451.072	-8.599	-22.555	1.58312	4.67494	1.56241	1.3853	1.8114
204000	206015	450.523	-9.148	-22.860	1.55026	4.57791	1.52999	1.3598	1.7782
204500	206525	449.974	-9.697	-23.165	1.51800	4.48266	1.49815	1.3348	1.7455
205000	207035	449.425	-10.246	-23.470	1.48634 - 1	4.38917 - 3	1.46691 - 4	1.3102 - 5	1.7133 - 4
205500	207545	448.876	-10.795	-23.775	1.45527	4.29740	1.43624	1.2860	1.6816
206000	208055	448.327	-11.344	-24.080	1.42477	4.20733	1.40614	1.2622	1.6505
206500	208565	447.778	-11.893	-24.385	1.39483	4.11893	1.37659	1.2387	1.6198
207000	209075	447.229	-12.442	-24.690	1.36545	4.03218	1.34760	1.2157	1.5896
207500	209585	446.680	-12.991	-24.995	1.33662	3.94704	1.31914	1.1930	1.5600
208000	210096	446.131	-13.540	-25.300	1.30833	3.86350	1.29122	1.1707	1.5308
208500	210606	445.582	-14.089	-25.605	1.28057	3.78152	1.26382	1.1487	1.5021
209000	211116	445.033	-14.638	-25.910	1.25333	3.70107	1.23694	1.1271	1.4738
209500	211626	444.484	-15.187	-26.215	1.22660	3.62215	1.21056	1.1058	1.4460
210000	212136	443.935	-15.736	-26.520	1.20038 - 1	3.54471 - 3	1.18468 - 4	1.0849 - 5	1.4187 - 4
210500	212646	443.386	-16.285	-26.825	1.17465	3.46874	1.15929	1.0644	1.3918
211000	213156	442.837	-16.834	-27.130	1.14941	3.39421	1.13438	1.0442	1.3654
211500	213666	442.288	-17.383	-27.435	1.12465	3.32110	1.10994	1.0243	1.3394
212000	214176	441.739	-17.932	-27.740	1.10037	3.24938	1.08598	1.0047	1.3138
212500	214686	441.190	-18.481	-28.045	1.07654	3.17903	1.06246	9.8550 - 6	1.2887
213000	215196	440.641	-19.030	-28.350	1.05318	3.11003	1.03940	9.6659	1.2639
213500	215706	440.092	-19.579	-28.655	1.03026	3.04235	1.01679	9.4800	1.2396
214000	216216	439.543	-20.128	-28.960	1.00778	2.97598	9.94605 - 5	9.2971	1.2157
214500	216726	438.994	-20.677	-29.265	9.85742 - 2	2.91089	9.72852	9.1174	1.1922
215000	217240	438.445	-21.226	-29.570	9.64127 - 2	2.84707 - 3	9.51519 - 5	8.9406 - 6	1.1691 - 4
215500	217750	437.896	-21.775	-29.875	9.42932	2.78448	9.30601	8.7669	1.1464
216000	218260	437.347	-22.324	-30.180	9.22149	2.72310	9.10090	8.5960	1.1240
216500	218770	436.798	-22.873	-30.485	9.01771	2.66293	8.89979	8.4281	1.1021
217000	219280	436.249	-23.422	-30.790	8.81792	2.60393	8.70261	8.2630	1.0805
217500	219790	435.700	-23.971	-31.095	8.62205	2.54609	8.50931	8.1008	1.0593
218000	220300	435.151	-24.520	-31.400	8.43004	2.48939	8.31980	7.9413	1.0384
218500	220810	434.602	-25.069	-31.705	8.24180	2.43380	8.13403	7.7845	1.0179
219000	221320	434.053	-25.618	-32.010	8.05729	2.37932	7.95193	7.6304	9.9778 - 5
219500	221835	433.504	-26.167	-32.315	7.87643	2.32591	7.77344	7.4790	9.7798
220000	222346	432.955	-26.716	-32.620	7.69917 - 2	2.27356 - 3	7.59849 - 5	7.3302 - 6	9.5852 - 5
220500	222857	432.406	-27.265	-32.925	7.52544	2.22226	7.42703	7.1840	9.3940
221000	223367	431.857	-27.814	-33.230	7.35518	2.17198	7.25900	7.0403	9.2061
221500	223878	431.308	-28.363	-33.535	7.18833	2.12271	7.09433	6.8991	9.0214
222000	224388	430.759	-28.912	-33.840	7.02483	2.07443	6.93297	6.7603	8.8400
222500	224900	430.210	-29.461	-34.145	6.86463	2.02712	6.77486	6.6240	8.6618
223000	225411	429.661	-29.999	-34.450	6.70765	1.98077	6.61994	6.4901	8.4867
223500	225922	429.112	-30.548	-34.755	6.55386	1.93535	6.46816	6.3586	8.3146
224000	226432	428.563	-31.097	-35.060	6.40319	1.89086	6.31945	6.2293	8.1456
224500	226943	428.014	-31.646	-35.365	6.25558	1.84727	6.17378	6.1024	7.9796
225000	227454	427.465	-32.195	-35.670	6.11098 - 2	1.80457 - 3	6.03107 - 5	5.9777 - 6	7.8166 - 5
225500	227965	426.916	-32.744	-35.975	5.96935	1.76275	5.89129	5.8552	7.6564
226000	228476	426.367	-33.293	-36.280	5.83062	1.72178	5.75437	5.7349	7.4991
226500	228987	425.818	-33.842	-36.585	5.69475	1.68166	5.62028	5.6167	7.3446
227000	229498	425.269	-34.391	-36.890	5.56167	1.64236	5.48895	5.5007	7.1928
227500	230009	424.720	-34.940	-37.195	5.43136	1.60388	5.36033	5.3867	7.0438
228000	230520	424.171	-35.489	-37.500	5.30374	1.56619	5.23439	5.2748	6.8975
228500	231031	423.622	-36.038	-37.805	5.17878	1.52929	5.11106	5.1649	6.7538
229000	231542	423.073	-36.587	-38.110	5.05643	1.49316	4.99031	5.0570	6.6127
229500	232053	422.524	-37.136	-38.415	4.93664	1.45779	4.87208	4.9511	6.4742

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
190000	188284	467.769	8.099	-13.278	2.94703 - 1	8.70257 - 3	2.90849 - 4	2.4663 - 5	3.2250 - 4
190500	188775	467.230	7.561	-13.577	2.88958	8.53293	2.85180	2.4210	3.1658
191000	189266	466.692	7.022	-13.877	2.83319	8.36642	2.79615	2.3765	3.1076
191500	189757	466.153	6.483	-14.176	2.77785	8.20298	2.74152	2.3328	3.0504
192000	190248	465.614	5.944	-14.475	2.72352	8.04255	2.68790	2.2898	2.9942
192500	190739	465.076	5.406	-14.775	2.67020	7.88508	2.63528	2.2475	2.9390
193000	191230	464.537	4.867	-15.074	2.61786	7.73054	2.58363	2.2061	2.8847
193500	191721	463.998	4.328	-15.373	2.56649	7.57885	2.53293	2.1653	2.8314
194000	192212	463.460	3.790	-15.672	2.51608	7.42997	2.48318	2.1252	2.7790
194500	192703	462.921	3.251	-15.971	2.46660	7.28386	2.43434	2.0858	2.7275
195000	193193	462.383	2.713	-16.271	2.41804 - 1	7.14047 - 3	2.38642 - 4	2.0472 - 5	2.6769 - 4
195500	193684	461.844	2.174	-16.570	2.37038	6.99974	2.33939	2.0092	2.6272
196000	194175	461.306	1.636	-16.869	2.32361	6.86163	2.29323	1.9718	2.5784
196500	194666	460.767	1.097	-17.168	2.27772	6.72610	2.24793	1.9351	2.5304
197000	195156	460.229	0.559	-17.467	2.23268	6.59309	2.20348	1.8991	2.4833
197500	195647	459.690	0.021	-17.766	2.18848	6.46257	2.15986	1.8637	2.4370
198000	196138	459.152	-0.518	-18.065	2.14511	6.33449	2.11705	1.8289	2.3915
198500	196628	458.614	-1.056	-18.365	2.10255	6.20882	2.07505	1.7947	2.3468
199000	197119	458.075	-1.595	-18.664	2.06078	6.08549	2.03384	1.7611	2.3029
199500	197609	457.537	-2.133	-18.963	2.01981	5.96448	1.99339	1.7281	2.2597
200000	198100	456.999	-2.671	-19.262	1.97960 - 1	5.84575 - 3	1.95371 - 4	1.6957 - 5	2.2174 - 4
200500	198591	456.461	-3.209	-19.561	1.94015	5.72925	1.91477	1.6639	2.1757
201000	199081	455.922	-3.748	-19.860	1.90144	5.61494	1.87657	1.6326	2.1348
201500	199572	455.384	-4.286	-20.159	1.86346	5.50279	1.83909	1.6019	2.0947
202000	200062	454.846	-4.824	-20.458	1.82619	5.39275	1.80231	1.5717	2.0552
202500	200552	454.306	-5.362	-20.757	1.78962	5.28475	1.76622	1.5436	2.0185
203000	201043	453.767	-5.901	-21.056	1.75370	5.17866	1.73076	1.5162	1.9827
203500	201533	453.229	-6.439	-21.355	1.71841	5.07447	1.69594	1.4893	1.9474
204000	202024	452.690	-6.978	-21.654	1.68376	4.97213	1.66174	1.4627	1.9127
204500	202514	452.151	-7.517	-21.953	1.64972	4.87163	1.62815	1.4366	1.8785
205000	203004	451.612	-8.056	-22.252	1.61630 - 1	4.77293 - 3	1.59516 - 4	1.4109 - 5	1.8449 - 4
205500	203495	451.073	-8.595	-22.551	1.58348	4.67601	1.56277	1.3855	1.8118
206000	203985	450.534	-9.134	-22.850	1.55125	4.58083	1.53096	1.3606	1.7792
206500	204475	450.000	-9.673	-23.149	1.51960	4.48737	1.49973	1.3361	1.7471
207000	204965	449.461	-10.212	-23.448	1.48852	4.39560	1.46906	1.3119	1.7155
207500	205456	448.922	-10.751	-23.747	1.45801	4.30549	1.43894	1.2881	1.6844
208000	205946	448.383	-11.290	-24.046	1.42805	4.21703	1.40938	1.2647	1.6538
208500	206436	447.844	-11.829	-24.345	1.39864	4.13018	1.38035	1.2417	1.6237
209000	206926	447.305	-12.368	-24.644	1.36977	4.04492	1.35185	1.2191	1.5941
209500	207416	446.766	-12.907	-24.943	1.34142	3.96121	1.32388	1.1968	1.5649
210000	207906	446.227	-13.446	-25.242	1.31360 - 1	3.87905 - 3	1.29642 - 4	1.1748 - 5	1.5362 - 4
210500	208396	445.688	-13.985	-25.541	1.28628	3.79839	1.26946	1.1532	1.5080
211000	208886	445.149	-14.524	-25.840	1.25947	3.71923	1.24301	1.1320	1.4802
211500	209376	444.610	-15.063	-26.139	1.23316	3.64153	1.21704	1.1111	1.4529
212000	209866	444.071	-15.602	-26.438	1.20734	3.56527	1.19155	1.0905	1.4260
212500	210356	443.532	-16.141	-26.737	1.18199	3.49042	1.16654	1.0703	1.3995
213000	210846	442.993	-16.680	-27.036	1.15712	3.41697	1.14199	1.0503	1.3735
213500	211336	442.454	-17.219	-27.335	1.13271	3.34489	1.11790	1.0308	1.3479
214000	211826	441.915	-17.758	-27.634	1.10876	3.27416	1.09426	1.0115	1.3227
214500	212316	441.376	-18.297	-27.933	1.08526	3.20476	1.07106	9.9254 - 6	1.2979
215000	212806	440.837	-18.836	-28.232	1.06220 - 1	3.13666 - 3	1.04831 - 4	9.7390 - 6	1.2735 - 4
215500	213296	440.298	-19.375	-28.531	1.03957	3.06985	1.02598	9.5556	1.2495
216000	213785	439.759	-19.914	-28.830	1.01737	3.00430	1.00407	9.3752	1.2259
216500	214275	439.220	-20.453	-29.129	9.95595 - 2	2.93999	9.82576 - 5	9.1978	1.2027
217000	214765	438.681	-20.992	-29.428	9.74231	2.87690	9.61492	9.0233	1.1799
217500	215255	438.142	-21.531	-29.727	9.53274	2.81502	9.40809	8.8517	1.1575
218000	215745	437.603	-22.070	-30.026	9.32718	2.75431	9.20521	8.6830	1.1354
218500	216234	437.064	-22.609	-30.325	9.12554	2.69477	9.00621	8.5170	1.1137
219000	216724	436.525	-23.148	-30.624	8.92777	2.63637	8.81103	8.3538	1.0924
219500	217214	435.986	-23.687	-30.923	8.73380	2.57909	8.61959	8.1934	1.0714
220000	217703	435.447	-24.226	-31.222	8.54358 - 2	2.52292 - 3	8.43186 - 5	8.0356 - 6	1.0508 - 4
220500	218193	434.908	-24.765	-31.521	8.35703	2.46783	8.24775	7.8805	1.0305
221000	218682	434.369	-25.304	-31.820	8.17409	2.41381	8.06720	7.7280	1.0105
221500	219172	433.830	-25.843	-32.119	7.99471	2.36084	7.89016	7.5781	9.9093 - 5
222000	219661	433.291	-26.382	-32.418	7.81882	2.30890	7.71657	7.4307	9.7166
222500	220151	432.752	-26.921	-32.717	7.64636	2.25797	7.54637	7.2858	9.5271
223000	220640	432.213	-27.460	-33.016	7.47728	2.20804	7.37950	7.1434	9.3409
223500	221130	431.674	-28.000	-33.315	7.31152	2.15909	7.21591	7.0034	9.1578
224000	221619	431.135	-28.539	-33.614	7.14901	2.11110	7.05553	6.8657	8.9779
224500	222109	430.596	-29.078	-33.913	6.98972	2.06406	6.89831	6.7305	8.8010
225000	222598	430.057	-29.617	-34.212	6.83357 - 2	2.01795 - 3	6.74421 - 5	6.5976 - 6	8.6272 - 5
225500	223087	429.518	-30.156	-34.511	6.68051	1.97275	6.59315	6.4669	8.4563
226000	223577	428.979	-30.695	-34.810	6.53050	1.92846	6.44510	6.3385	8.2885
226500	224066	428.440	-31.234	-35.109	6.38348	1.88504	6.30000	6.2124	8.1235
227000	224555	427.901	-31.773	-35.408	6.23939	1.84249	6.15780	6.0884	7.9614
227500	225045	427.362	-32.312	-35.707	6.09819	1.80079	6.01845	5.9666	7.8021
228000	225534	426.823	-32.851	-36.006	5.95983	1.75994	5.88189	5.8469	7.6456
228500	226023	426.284	-33.390	-36.305	5.82425	1.71990	5.74808	5.7293	7.4918
229000	226512	425.745	-33.929	-36.604	5.69140	1.68067	5.61698	5.6138	7.3407
229500	227002	425.206	-34.468	-36.903	5.56125	1.64224	5.48853	5.5003	7.1923

TABLE IV.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
230000	232565	389.221	-70.449	-56.916	4.81935 - 2	1.42315 - 3	4.75633 - 5	4.8471 - 6	6.3382 - 5
230500	233076	388.124	-71.546	-57.526	4.70454	1.38925	4.64302	4.7450	6.2047
231000	233588	387.027	-72.643	-58.135	4.59215	1.35606	4.53210	4.6448	6.0736
231500	234099	385.929	-73.741	-58.745	4.48213	1.32357	4.42352	4.5464	5.9450
232000	234610	384.832	-74.838	-59.354	4.37445	1.29177	4.31725	4.4498	5.8187
232500	235122	383.735	-75.935	-59.964	4.26906	1.26065	4.21323	4.3550	5.6948
233000	235633	382.638	-77.032	-60.574	4.16592	1.23019	4.11144	4.2620	5.5731
233500	236144	381.540	-78.130	-61.183	4.06498	1.20039	4.01182	4.1707	5.4537
234000	236656	380.443	-79.227	-61.793	3.96621	1.17122	3.91434	4.0811	5.3366
234500	237167	379.346	-80.324	-62.402	3.86956	1.14268	3.81896	3.9932	5.2216
235000	237679	378.248	-81.422	-63.012	3.77500 - 2	1.11476 - 3	3.72564 - 5	3.9069 - 6	5.1088 - 5
235500	238190	377.151	-82.519	-63.622	3.68249	1.08744	3.63433	3.8222	4.9980
236000	238702	376.054	-83.616	-64.231	3.59198	1.06071	3.54501	3.7392	4.8894
236500	239213	374.957	-84.713	-64.841	3.50344	1.03457	3.45763	3.6577	4.7829
237000	239725	373.859	-85.811	-65.450	3.41684	1.00899	3.37216	3.5777	4.6783
237500	240236	372.762	-86.908	-66.060	3.33213	9.83977 - 4	3.28856	3.4993	4.5758
238000	240748	371.665	-88.005	-66.670	3.24928	9.59512	3.20679	3.4224	4.4752
238500	241259	370.567	-89.103	-67.279	3.16825	9.35585	3.12682	3.3469	4.3765
239000	241771	369.470	-90.200	-67.889	3.08902	9.12186	3.04862	3.2729	4.2797
239500	242283	368.373	-91.297	-68.498	3.01154	8.89306	2.97215	3.2003	4.1848
240000	242794	367.276	-92.394	-69.108	2.93577 - 2	8.66934 - 4	2.89738 - 5	3.1291 - 6	4.0917 - 5
240500	243306	366.178	-93.492	-69.718	2.86170	8.45060	2.82428	3.0593	4.0004
241000	243818	365.081	-94.589	-70.327	2.78928	8.23675	2.75281	2.9908	3.9109
241500	244330	363.984	-95.686	-70.937	2.71849	8.02770	2.68294	2.9237	3.8231
242000	244842	362.886	-96.784	-71.546	2.64929	7.82334	2.61464	2.8579	3.7371
242500	245353	361.789	-97.881	-72.156	2.58164	7.62358	2.54788	2.7934	3.6527
243000	245865	360.692	-98.978	-72.766	2.51553	7.42835	2.48263	2.7301	3.5700
243500	246377	359.595	-100.075	-73.375	2.45091	7.23754	2.41886	2.6681	3.4889
244000	246889	358.497	-101.173	-73.985	2.38777	7.05107	2.35654	2.6073	3.4094
244500	247401	357.400	-102.270	-74.594	2.32606	6.86886	2.29565	2.5477	3.3315
245000	247913	356.303	-103.367	-75.204	2.26577 - 2	6.69082 - 4	2.23614 - 5	2.4894 - 6	3.2552 - 5
245500	248425	355.206	-104.464	-75.814	2.20686	6.51686	2.17800	2.4321	3.1803
246000	248937	354.11	-105.56	-76.424	2.1493	6.3469	2.1212	2.376	3.107
246500	249449	353.01	-106.66	-77.03	2.0931	6.1809	2.0657	2.321	3.035
247000	249961	351.91	-107.76	-77.64	2.0382	6.0187	2.0115	2.267	2.965
247500	250473	350.82	-108.85	-78.25	1.9845	5.8603	1.9586	2.214	2.896
248000	250985	349.72	-109.95	-78.86	1.9321	5.7056	1.9069	2.163	2.828
248500	251497	348.62	-111.05	-79.47	1.8810	5.5545	1.8564	2.112	2.762
249000	252009	347.52	-112.15	-80.08	1.8310	5.4069	1.8071	2.062	2.697
249500	252521	346.43	-113.24	-80.69	1.7822	5.2628	1.7589	2.014	2.633
250000	253034	345.33	-114.34	-81.30	1.7346 - 2	5.1222 - 4	1.7119 - 5	1.966 - 6	2.571 - 5
250500	253546	344.23	-115.44	-81.91	1.6880	4.9848	1.6660	1.920	2.510
251000	254058	343.14	-116.53	-82.52	1.6426	4.8507	1.6212	1.874	2.450
251500	254570	342.04	-117.63	-83.13	1.5983	4.7198	1.5774	1.829	2.392
252000	255083	340.94	-118.73	-83.74	1.5550	4.5921	1.5347	1.785	2.335
252500	255595	339.84	-119.83	-84.35	1.5128	4.4673	1.4930	1.743	2.279
253000	256107	338.75	-120.92	-84.96	1.4716	4.3456	1.4524	1.701	2.224
253500	256620	337.65	-122.02	-85.57	1.4314	4.2269	1.4127	1.660	2.170
254000	257132	336.55	-123.12	-86.18	1.3921	4.1110	1.3739	1.619	2.117
254500	257645	335.45	-124.22	-86.79	1.3538	3.9979	1.3361	1.580	2.066
255000	258157	334.36	-125.31	-87.40	1.3165 - 2	3.8876 - 4	1.2993 - 5	1.541 - 6	2.015 - 5
255500	258669	333.26	-126.41	-88.01	1.2800	3.7800	1.2633	1.504	1.966
256000	259182	332.16	-127.51	-88.62	1.2445	3.6750	1.2282	1.467	1.918
256500	259694	331.07	-128.60	-89.22	1.2098	3.5726	1.1940	1.431	1.871
257000	260207	329.97	-129.70	-89.83	1.1760	3.4727	1.1606	1.395	1.824
257500	260720	328.87	-130.80	-90.44	1.1430	3.3753	1.1281	1.361	1.779
258000	261232	327.77	-131.90	-91.05	1.1108	3.2803	1.0963	1.327	1.735
258500	261745	326.68	-132.99	-91.66	1.0795	3.1877	1.0654	1.294	1.691
259000	262257	325.58	-134.09	-92.27	1.0489	3.0974	1.0352	1.261	1.649
259500	262770	325.17	-134.50	-92.50	1.0191	3.0094	1.0058	1.227	1.604
260000	263283	325.17	-134.50	-92.50	9.9015 - 3	2.9239 - 4	9.7721 - 6	1.192 - 6	1.559 - 5
260500	263796	325.17	-134.50	-92.50	9.6202	2.8409	9.4944	1.158	1.514
261000	264308	325.17	-134.50	-92.50	9.3469	2.7601	9.2247	1.125	1.471
261500	264821	325.17	-134.50	-92.50	9.0814	2.6817	8.9626	1.093	1.430
262000	265334	325.17	-134.50	-92.50	8.8234	2.6055	8.7080	1.062	1.389
262500	265847	325.17	-134.50	-92.50	8.5727	2.5315	8.4606	1.032	1.350
263000	266359	325.17	-134.50	-92.50	8.3292	2.4596	8.2203	1.003	1.311
263500	266872	325.17	-134.50	-92.50	8.0926	2.3897	7.9867	9.742 - 7	1.274
264000	267385	325.17	-134.50	-92.50	7.8627	2.3218	7.7598	9.466	1.238
264500	267898	325.17	-134.50	-92.50	7.6393	2.2559	7.5394	9.197	1.203
265000	268411	325.17	-134.50	-92.50	7.4223 - 3	2.1918 - 4	7.3252 - 6	8.935 - 7	1.168 - 5
265500	268924	325.17	-134.50	-92.50	7.2114	2.1295	7.1171	8.682	1.135
266000	269437	325.17	-134.50	-92.50	7.0065	2.0690	6.9149	8.435	1.103
266500	269950	325.17	-134.50	-92.50	6.8075	2.0102	6.7184	8.195	1.072
267000	270463	325.17	-134.50	-92.50	6.6141	1.9531	6.5276	7.962	1.041
267500	270976	325.17	-134.50	-92.50	6.4262	1.8976	6.3421	7.736	1.012
268000	271489	325.17	-134.50	-92.50	6.2436	1.8437	6.1620	7.516	9.829 - 6
268500	272002	325.17	-134.50	-92.50	6.0662	1.7914	5.9869	7.303	9.550
269000	272516	325.17	-134.50	-92.50	5.8939	1.7405	5.8168	7.095	9.278
269500	273029	325.17	-134.50	-92.50	5.7264	1.6910	5.6516	6.894	9.015

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
230000	227491	394.728	-64.942	-53.857	5.43373 - 2	1.60458 - 3	5.36268 - 5	5.3888 - 6	7.0465 - 5
230500	227980	393.654	-66.016	-54.453	5.30882	1.56769	5.23939	5.2793	6.9033
231000	228469	392.581	-67.089	-55.049	5.18644	1.53156	5.11862	5.1717	6.7626
231500	228958	391.508	-68.162	-55.646	5.06658	1.49616	5.00032	5.0660	6.6244
232000	229447	390.434	-69.236	-56.242	4.94917	1.46149	4.88445	4.9622	6.4887
232500	229936	389.361	-70.309	-56.838	4.83417	1.42753	4.77096	4.8603	6.3554
233000	230425	388.288	-71.382	-57.434	4.72155	1.39427	4.65980	4.7601	6.2245
233500	230914	387.215	-72.455	-58.031	4.61125	1.36170	4.55095	4.6618	6.0959
234000	231403	386.142	-73.528	-58.627	4.50324	1.32981	4.44435	4.5653	5.9697
234500	231892	385.069	-74.601	-59.223	4.39747	1.29857	4.33997	4.4705	5.8457
235000	232381	383.996	-75.674	-59.819	4.29391 - 2	1.26799 - 3	4.23776 - 5	4.3774 - 6	5.7240 - 5
235500	232870	382.923	-76.747	-60.415	4.19251	1.23805	4.13769	4.2860	5.6045
236000	233359	381.850	-77.820	-61.011	4.09324	1.20873	4.03972	4.1963	5.4872
236500	233848	380.777	-78.893	-61.607	3.99606	1.18003	3.94380	4.1082	5.3720
237000	234337	379.704	-79.966	-62.203	3.90092	1.15194	3.84990	4.0217	5.2589
237500	234825	378.632	-81.038	-62.799	3.80778	1.12444	3.75799	3.9368	5.1479
238000	235314	377.559	-82.111	-63.395	3.71663	1.09752	3.66803	3.8535	5.0389
238500	235803	376.486	-83.184	-63.991	3.62741	1.07117	3.57997	3.7717	4.9320
239000	236292	375.414	-84.256	-64.587	3.54009	1.04539	3.49379	3.6914	4.8270
239500	236780	374.341	-85.329	-65.183	3.45463	1.02015	3.40946	3.6126	4.7240
240000	237269	373.269	-86.401	-65.779	3.37101 - 2	9.95458 - 4	3.32693 - 5	3.5353 - 6	4.6229 - 5
240500	237758	372.196	-87.474	-66.374	3.28918	9.71294	3.24617	3.4594	4.5237
241000	238246	371.124	-88.546	-66.970	3.20911	9.47651	3.16715	3.3850	4.4263
241500	238735	370.052	-89.618	-67.566	3.13078	9.24518	3.08984	3.3119	4.3308
242000	239224	368.979	-90.691	-68.162	3.05414	9.01887	3.01420	3.2402	4.2370
242500	239712	367.907	-91.763	-68.757	2.97916	8.79746	2.94020	3.1699	4.1451
243000	240201	366.835	-92.835	-69.353	2.90582	8.58089	2.86782	3.1009	4.0548
243500	240689	365.763	-93.907	-69.948	2.83408	8.36904	2.79702	3.0332	3.9663
244000	241178	364.691	-94.979	-70.544	2.76391	8.16183	2.72777	2.9668	3.8795
244500	241666	363.619	-96.051	-71.140	2.69529	7.95918	2.66004	2.9017	3.7943
245000	242155	362.547	-97.123	-71.735	2.62817 - 2	7.76099 - 4	2.59380 - 5	2.8378 - 6	3.7108 - 5
245500	242643	361.475	-98.195	-72.331	2.56254	7.56718	2.52903	2.7751	3.6288
246000	243132	360.403	-99.267	-72.927	2.4984	7.3777	2.4657	2.714	3.548
246500	243620	359.331	-100.340	-73.522	2.4356	7.1924	2.4038	2.653	3.470
247000	244108	358.259	-101.412	-74.118	2.3743	7.0112	2.3432	2.594	3.392
247500	244597	357.187	-102.484	-74.714	2.3143	6.8341	2.2840	2.536	3.317
248000	245085	356.115	-103.556	-75.310	2.2556	6.6609	2.2261	2.480	3.242
248500	245573	355.043	-104.628	-75.906	2.1983	6.4916	2.1696	2.424	3.169
249000	246062	353.971	-105.700	-76.502	2.1423	6.3262	2.1143	2.369	3.098
249500	246550	352.900	-106.772	-77.098	2.0875	6.1645	2.0602	2.316	3.028
250000	247038	351.828	-107.844	-77.694	2.0340 - 2	6.0065 - 4	2.0074 - 5	2.263 - 6	2.959 - 5
250500	247526	350.756	-108.916	-78.289	1.9817	5.8520	1.9558	2.212	2.892
251000	248015	349.684	-109.988	-78.885	1.9306	5.7011	1.9054	2.161	2.826
251500	248503	348.612	-111.060	-79.480	1.8807	5.5537	1.8561	2.112	2.761
252000	248991	347.540	-112.132	-80.076	1.8319	5.4096	1.8079	2.063	2.698
252500	249479	346.468	-113.204	-80.672	1.7842	5.2688	1.7609	2.016	2.636
253000	249967	345.396	-114.276	-81.268	1.7377	5.1313	1.7149	1.969	2.575
253500	250455	344.324	-115.348	-81.864	1.6922	4.9970	1.6700	1.924	2.516
254000	250943	343.252	-116.420	-82.460	1.6477	4.8658	1.6262	1.879	2.457
254500	251431	342.180	-117.492	-83.056	1.6043	4.7376	1.5834	1.835	2.400
255000	251919	341.108	-118.564	-83.652	1.5620 - 2	4.6125 - 4	1.5415 - 5	1.792 - 6	2.344 - 5
255500	252407	340.036	-119.636	-84.248	1.5206	4.4902	1.5007	1.750	2.289
256000	252895	338.964	-120.708	-84.844	1.4802	4.3709	1.4608	1.709	2.235
256500	253383	337.892	-121.780	-85.440	1.4407	4.2544	1.4219	1.669	2.182
257000	253871	336.820	-122.852	-86.036	1.4022	4.1406	1.3838	1.630	2.131
257500	254359	335.748	-123.924	-86.632	1.3646	4.0295	1.3467	1.591	2.080
258000	254847	334.676	-124.996	-87.228	1.3278	3.9211	1.3105	1.553	2.031
258500	255335	333.604	-126.068	-87.824	1.2920	3.8153	1.2751	1.516	1.982
259000	255823	332.532	-127.140	-88.420	1.2570	3.7119	1.2406	1.480	1.935
259500	256311	331.460	-128.212	-89.016	1.2229	3.6111	1.2069	1.444	1.888
260000	256798	330.388	-129.284	-89.612	1.1895 - 2	3.5127 - 4	1.1740 - 5	1.409 - 6	1.843 - 5
260500	257286	329.316	-130.356	-90.208	1.1570	3.4167	1.1419	1.375	1.798
261000	257774	328.244	-131.428	-90.804	1.1253	3.3230	1.1106	1.342	1.755
261500	258261	327.172	-132.500	-91.400	1.0944	3.2316	1.0800	1.309	1.712
262000	258749	326.100	-133.572	-91.996	1.0642	3.1425	1.0502	1.277	1.670
262500	259237	325.028	-134.644	-92.592	1.0347	3.0555	1.0212	1.246	1.629
263000	259724	323.956	-135.716	-93.188	1.0060	2.9708	9.9287 - 6	1.211	1.584
263500	260212	322.884	-136.788	-93.784	9.7814 - 3	2.8884	9.6535	1.178	1.540
264000	260699	321.812	-137.860	-94.380	9.5103	2.8084	9.3859	1.145	1.497
264500	261187	320.740	-138.932	-94.976	9.2468	2.7306	9.1258	1.113	1.456
265000	261675	319.668	-140.004	-95.572	8.9905 - 3	2.6549 - 4	8.8729 - 6	1.082 - 6	1.415 - 5
265500	262162	318.596	-141.076	-96.168	8.7414	2.5813	8.6271	1.052	1.376
266000	262650	317.524	-142.148	-96.764	8.4992	2.5098	8.3880	1.023	1.338
266500	263137	316.452	-143.220	-97.360	8.2637	2.4403	8.1556	9.948 - 7	1.301
267000	263624	315.380	-144.292	-97.956	8.0347	2.3727	7.9297	9.673	1.265
267500	264112	314.308	-145.364	-98.552	7.8121	2.3069	7.7100	9.405	1.230
268000	264599	313.236	-146.436	-99.148	7.5957	2.2430	7.4964	9.144	1.196
268500	265087	312.164	-147.508	-99.744	7.3853	2.1809	7.2887	8.891	1.163
269000	265574	311.092	-148.580	-100.340	7.1807	2.1205	7.0868	8.645	1.130
269500	266061	310.020	-149.652	-100.936	6.9818	2.0617	6.8905	8.405	1.099

TABLE IV.—Concluded  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
H, ft	Z, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
270000	273542	325.17	-134.50	-92.50	5.5638 - 3	1.6430 - 4	5.4910 - 6	6.698 - 7	8.759 - 6
270500	274055	325.17	-134.50	-92.50	5.4057	1.5963	5.3350	6.508	8.510
271000	274568	325.17	-134.50	-92.50	5.2521	1.5510	5.1834	6.323	8.268
271500	275082	325.17	-134.50	-92.50	5.1029	1.5069	5.0362	6.143	8.033
272000	275595	325.17	-134.50	-92.50	4.9579	1.4641	4.8931	5.969	7.805
272500	276108	325.17	-134.50	-92.50	4.8171	1.4225	4.7541	5.799	7.583
273000	276622	325.17	-134.50	-92.50	4.6802	1.3821	4.6190	5.634	7.368
273500	277135	325.17	-134.50	-92.50	4.5473	1.3428	4.4878	5.474	7.158
274000	277648	325.17	-134.50	-92.50	4.4181	1.3047	4.3603	5.319	6.955
274500	278162	325.17	-134.50	-92.50	4.2926	1.2676	4.2364	5.168	6.757
275000	278675	325.17	-134.50	-92.50	4.1706 - 3	1.2316 - 4	4.1161 - 6	5.021 - 7	6.565 - 6
275500	279189	325.17	-134.50	-92.50	4.0521	1.1966	3.9992	4.878	6.379
276000	279702	325.17	-134.50	-92.50	3.9370	1.1626	3.8855	4.740	6.198
276500	280216	325.17	-134.50	-92.50	3.8252	1.1296	3.7752	4.605	6.022
277000	280729	325.17	-134.50	-92.50	3.7165	1.0975	3.6679	4.474	5.851
277500	281243	325.17	-134.50	-92.50	3.6109	1.0663	3.5637	4.347	5.684
278000	281756	325.17	-134.50	-92.50	3.5083	1.0360	3.4625	4.224	5.523
278500	282270	325.17	-134.50	-92.50	3.4087	1.0066	3.3641	4.104	5.366
279000	282784	325.17	-134.50	-92.50	3.3118	9.7798 - 5	3.2685	3.987	5.214
279500	283297	325.17	-134.50	-92.50	3.2177	9.5020	3.1757	3.874	5.065
280000	283811	325.17	-134.50	-92.50	3.1263 - 3	9.2320 - 5	3.0854 - 6	3.764 - 7	4.922 - 6
280500	284325	325.17	-134.50	-92.50	3.0375	8.9698	2.9978	3.657	4.782
281000	284838	325.17	-134.50	-92.50	2.9512	8.7149	2.9126	3.553	4.646
281500	285352	325.17	-134.50	-92.50	2.8674	8.4674	2.8299	3.452	4.514
282000	285866	325.17	-134.50	-92.50	2.7859	8.2268	2.7495	3.354	4.386
282500	286380	325.17	-134.50	-92.50	2.7068	7.9931	2.6714	3.259	4.261
283000	286894	325.17	-134.50	-92.50	2.6299	7.7660	2.5955	3.166	4.140
283500	287408	325.17	-134.50	-92.50	2.5552	7.5454	2.5217	3.076	4.022
284000	287921	325.17	-134.50	-92.50	2.4826	7.3310	2.4501	2.989	3.908
284500	288435	325.17	-134.50	-92.50	2.4120	7.1227	2.3805	2.904	3.797
285000	288949	325.17	-134.50	-92.50	2.3435 - 3	6.9204 - 5	2.3129 - 6	2.821 - 7	3.689 - 6
285500	289463	325.17	-134.50	-92.50	2.2769	6.7238	2.2472	2.741	3.584
286000	289977	325.17	-134.50	-92.50	2.2122	6.5328	2.1833	2.663	3.483
286500	290491	325.17	-134.50	-92.50	2.1494	6.3472	2.1213	2.588	3.384
287000	291005	325.17	-134.50	-92.50	2.0883	6.1669	2.0610	2.514	3.287
287500	291519	325.17	-134.50	-92.50	2.0290	5.9917	2.0025	2.443	3.194
288000	292033	325.17	-134.50	-92.50	1.9714	5.8214	1.9456	2.373	3.103
288500	292548	325.17	-134.50	-92.50	1.9154	5.6561	1.8903	2.306	3.015
289000	293062	325.17	-134.50	-92.50	1.8609	5.4954	1.8366	2.240	2.930
289500	293576	325.17	-134.50	-92.50	1.8081	5.3392	1.7844	2.177	2.846
290000	294090	325.17	-134.50	-92.50	1.7567 - 3	5.1876 - 5	1.7337 - 6	2.115 - 7	2.765 - 6
290500	294604	325.17	-134.50	-92.50	1.7068	5.0402	1.6845	2.055	2.687
291000	295119	325.17	-134.50	-92.50	1.6583	4.8970	1.6366	1.996	2.611
291500	295633	325.75	-133.92	-92.18	1.6112	4.7580	1.5902	1.936	2.532
292000	296147	326.60	-133.07	-91.71	1.5656	4.6232	1.5451	1.876	2.454
292500	296661	327.44	-132.23	-91.24	1.5214	4.4926	1.5015	1.819	2.378
293000	297176	328.28	-131.39	-90.77	1.4785	4.3660	1.4592	1.763	2.305
293500	297690	329.12	-130.55	-90.30	1.4369	4.2433	1.4182	1.709	2.235
294000	298204	329.97	-129.70	-89.84	1.3967	4.1243	1.3784	1.657	2.167
294500	298719	330.81	-128.86	-89.37	1.3576	4.0090	1.3398	1.606	2.101
295000	299233	331.65	-128.02	-88.90	1.3197 - 3	3.8972 - 5	1.3025 - 6	1.558 - 7	2.037 - 6
295500	299748	332.49	-127.18	-88.43	1.2830	3.7887	1.2662	1.510	1.975
296000	300262	333.33	-126.34	-87.96	1.2474	3.6836	1.2311	1.465	1.915
296500	300777	334.18	-125.49	-87.50	1.2129	3.5816	1.1970	1.421	1.858
297000	301291	335.02	-124.65	-87.03	1.1794	3.4827	1.1639	1.378	1.802
297500	301806	335.86	-123.81	-86.56	1.1469	3.3867	1.1319	1.337	1.748
298000	302321	336.70	-122.97	-86.09	1.1154	3.2937	1.1008	1.297	1.695
298500	302835	337.54	-122.13	-85.63	1.0848	3.2034	1.0706	1.258	1.645
299000	303350	338.38	-121.29	-85.16	1.0551	3.1158	1.0413	1.220	1.596
299500	303864	339.22	-120.45	-84.69	1.0264	3.0308	1.0129	1.184	1.548
300000	304379	340.06	-119.61	-84.23	9.9843 - 4	2.9484 - 5	9.8537 - 7	1.149 - 7	1.503 - 6



TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
270000	266549	325.17	-134.50	-92.50	6.7884 - 3	2.0046 - 4	6.6996 - 6	8.172 - 7	1.069 - 5
270500	267036	325.17	-134.50	-92.50	6.6004	1.9491	6.5141	7.946	1.039
271000	267523	325.17	-134.50	-92.50	6.4176	1.8951	6.3337	7.726	1.010
271500	268010	325.17	-134.50	-92.50	6.2399	1.8426	6.1583	7.512	9.823 - 6
272000	268498	325.17	-134.50	-92.50	6.0671	1.7916	5.9877	7.304	9.551
272500	268985	325.17	-134.50	-92.50	5.8990	1.7420	5.8219	7.102	9.286
273000	269472	325.17	-134.50	-92.50	5.7357	1.6937	5.6607	6.905	9.029
273500	269959	325.17	-134.50	-92.50	5.5769	1.6469	5.5039	6.714	8.779
274000	270446	325.17	-134.50	-92.50	5.4225	1.6013	5.3516	6.528	8.536
274500	270933	325.17	-134.50	-92.50	5.2723	1.5569	5.2034	6.347	8.300
275000	271420	325.17	-134.50	-92.50	5.1264 - 3	1.5138 - 4	5.0593 - 6	6.171 - 7	8.070 - 6
275500	271908	325.17	-134.50	-92.50	4.9844	1.4719	4.9193	6.001	7.847
276000	272395	325.17	-134.50	-92.50	4.8465	1.4312	4.7831	5.835	7.629
276500	272882	325.17	-134.50	-92.50	4.7123	1.3915	4.6507	5.673	7.418
277000	273369	325.17	-134.50	-92.50	4.5819	1.3530	4.5219	5.516	7.213
277500	273856	325.17	-134.50	-92.50	4.4550	1.3156	4.3968	5.363	7.013
278000	274342	325.17	-134.50	-92.50	4.3317	1.2792	4.2751	5.215	6.819
278500	274829	325.17	-134.50	-92.50	4.2118	1.2438	4.1568	5.071	6.630
279000	275316	325.17	-134.50	-92.50	4.0953	1.2093	4.0417	4.930	6.447
279500	275803	325.17	-134.50	-92.50	3.9820	1.1759	3.9299	4.794	6.268
280000	276290	325.17	-134.50	-92.50	3.8718 - 3	1.1433 - 4	3.8211 - 6	4.661 - 7	6.095 - 6
280500	276777	325.17	-134.50	-92.50	3.7646	1.1117	3.7154	4.532	5.926
281000	277264	325.17	-134.50	-92.50	3.6605	1.0809	3.6126	4.407	5.762
281500	277750	325.17	-134.50	-92.50	3.5592	1.0510	3.5126	4.285	5.603
282000	278237	325.17	-134.50	-92.50	3.4607	1.0219	3.4154	4.166	5.448
282500	278724	325.17	-134.50	-92.50	3.3650	9.9367 - 5	3.3210	4.051	5.297
283000	279211	325.17	-134.50	-92.50	3.2719	9.6618	3.2291	3.939	5.151
283500	279697	325.17	-134.50	-92.50	3.1814	9.3945	3.1398	3.830	5.008
284000	280184	325.17	-134.50	-92.50	3.0934	9.1347	3.0529	3.724	4.870
284500	280671	325.17	-134.50	-92.50	3.0078	8.8820	2.9685	3.621	4.735
285000	281157	325.17	-134.50	-92.50	2.9246 - 3	8.6363 - 5	2.8863 - 6	3.521 - 7	4.604 - 6
285500	281644	325.17	-134.50	-92.50	2.8437	8.3974	2.8065	3.423	4.477
286000	282130	325.17	-134.50	-92.50	2.7651	8.1652	2.7289	3.329	4.353
286500	282617	325.17	-134.50	-92.50	2.6886	7.9394	2.6534	3.237	4.232
287000	283103	325.17	-134.50	-92.50	2.6142	7.7198	2.5800	3.147	4.115
287500	283590	325.17	-134.50	-92.50	2.5419	7.5063	2.5087	3.060	4.002
288000	284076	325.17	-134.50	-92.50	2.4716	7.2988	2.4393	2.976	3.891
288500	284563	325.17	-134.50	-92.50	2.4033	7.0970	2.3719	2.893	3.783
289000	285049	325.17	-134.50	-92.50	2.3369	6.9007	2.3063	2.813	3.679
289500	285536	325.17	-134.50	-92.50	2.2722	6.7099	2.2425	2.735	3.577
290000	286022	325.17	-134.50	-92.50	2.2094 - 3	6.5244 - 5	2.1805 - 6	2.660 - 7	3.478 - 6
290500	286509	325.17	-134.50	-92.50	2.1483	6.3441	2.1203	2.586	3.382
291000	286995	325.17	-134.50	-92.50	2.0890	6.1687	2.0616	2.515	3.288
291500	287481	325.17	-134.50	-92.50	2.0312	5.9982	2.0046	2.445	3.198
292000	287967	325.17	-134.50	-92.50	1.9751	5.8324	1.9492	2.378	3.109
292500	288454	325.17	-134.50	-92.50	1.9205	5.6712	1.8954	2.312	3.023
293000	288940	325.17	-134.50	-92.50	1.8674	5.5144	1.8430	2.248	2.940
293500	289426	325.17	-134.50	-92.50	1.8158	5.3620	1.7920	2.186	2.858
294000	289912	325.17	-134.50	-92.50	1.7656	5.2138	1.7425	2.126	2.779
294500	290399	325.17	-134.50	-92.50	1.7168	5.0697	1.6944	2.067	2.703
295000	290885	325.17	-134.50	-92.50	1.6694 - 3	4.9296 - 5	1.6475 - 6	2.010 - 7	2.628 - 6
295500	291371	325.54	-134.13	-92.30	1.6232	4.7934	1.6020	1.952	2.552
296000	291857	326.36	-133.31	-91.84	1.5785	4.6613	1.5579	1.893	2.476
296500	292343	327.17	-132.50	-91.39	1.5351	4.5331	1.5150	1.837	2.402
297000	292829	327.99	-131.68	-90.93	1.4930	4.4088	1.4735	1.782	2.330
297500	293315	328.81	-130.86	-90.48	1.4522	4.2882	1.4332	1.729	2.261
298000	293801	329.63	-130.04	-90.02	1.4125	4.1712	1.3941	1.677	2.193
298500	294287	330.45	-129.22	-89.57	1.3741	4.0576	1.3561	1.628	2.128
299000	294773	331.27	-128.40	-89.11	1.3368	3.9475	1.3193	1.580	2.065
299500	295259	332.09	-127.58	-88.66	1.3006	3.8405	1.2835	1.533	2.004
300000	295745	332.90	-126.77	-88.20	1.2654 - 3	3.7368 - 5	1.2489 - 6	1.488 - 7	1.946 - 6

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
300000	295745	332.90	-126.77	-88.20	1.2654 - 3	3.7368 - 5	1.2489 - 6	1.488 - 7	1.946 - 6
301000	296717	334.54	-125.13	-87.29	1.1982	3.5383	1.1825	1.402	1.833
302000	297689	336.18	-123.49	-86.39	1.1349	3.3513	1.1200	1.321	1.728
303000	298660	337.81	-121.86	-85.48	1.0752	3.1750	1.0611	1.246	1.629
304000	299632	339.44	-120.23	-84.57	1.0189	3.0089	1.0056	1.175	1.536
305000	300603	341.07	-118.60	-83.67	9.6584 - 4	2.8521	9.5321 - 7	1.108	1.449
306000	301574	342.70	-116.97	-82.76	9.1577	2.7043	9.0379	1.046	1.367
307000	302546	344.33	-115.34	-81.86	8.6852	2.5647	8.5716	9.870 - 8	1.291
308000	303517	345.96	-113.71	-80.95	8.2392	2.4330	8.1315	9.319	1.219
309000	304488	347.58	-112.09	-80.05	7.8181	2.3087	7.7159	8.801	1.151
310000	305459	349.20	-110.47	-79.15	7.4204 - 4	2.1912 - 5	7.3234 - 7	8.314 - 8	1.087 - 6
311000	306430	350.82	-108.85	-78.25	7.0447	2.0893	6.9526	7.856	1.027
312000	307400	352.44	-107.23	-77.35	6.6897	1.9755	6.6022	7.425	9.709 - 7
313000	308371	354.05	-105.62	-76.45	6.3541	1.8764	6.2710	7.020	9.179
314000	309342	355.67	-104.00	-75.56	6.0368	1.7827	5.9579	6.638	8.681
315000	310312	357.28	-102.39	-74.66	5.7368	1.6941	5.6618	6.279	8.211
316000	311283	358.88	-100.79	-73.77	5.4529	1.6103	5.3816	5.941	7.769
317000	312253	360.49	-99.18	-72.88	5.1844	1.5309	5.1166	5.623	7.353
318000	313223	362.09	-97.58	-71.99	4.9302	1.4559	4.8657	5.323	6.961
319000	314193	363.69	-95.98	-71.10	4.6896	1.3848	4.6282	5.040	6.591
320000	315163	365.28	-94.39	-70.22	4.4617 - 4	1.3175 - 5	4.4034 - 7	4.774 - 8	6.242 - 7
321000	316133	366.87	-92.80	-69.33	4.2459	1.2538	4.1904	4.523	5.914
322000	317103	368.46	-91.21	-68.45	4.0414	1.1934	3.9886	4.286	5.604
323000	318073	370.04	-89.63	-67.57	3.8477	1.1362	3.7974	4.062	5.312
324000	319043	371.62	-88.05	-66.69	3.6640	1.0820	3.6161	3.851	5.036
325000	320012	373.20	-86.47	-65.82	3.4899	1.0306	3.4443	3.652	4.775
326000	320982	374.78	-84.89	-64.94	3.3248	9.8181 - 6	3.2813	3.464	4.530
327000	321951	376.35	-83.32	-64.07	3.1682	9.3556	3.1268	3.286	4.297
328000	322920	377.91	-81.76	-63.20	3.0196	8.9168	2.9801	3.119	4.078
329000	323890	380.48	-79.19	-61.77	2.8787	8.5009	2.8411	2.953	3.861
330000	324859	383.13	-76.54	-60.30	2.7454 - 4	8.1072 - 6	2.7095 - 7	2.796 - 8	3.656 - 7
331000	325828	385.78	-73.89	-58.83	2.6192	7.7344	2.5849	2.648	3.463
332000	326797	388.42	-71.25	-57.36	2.4996	7.3812	2.4669	2.509	3.281
333000	327766	391.06	-68.61	-55.90	2.3862	7.0464	2.3550	2.379	3.111
334000	328734	393.69	-65.98	-54.43	2.2787	6.7291	2.2489	2.256	2.950
335000	329703	396.32	-63.35	-52.97	2.1768	6.4281	2.1483	2.140	2.799
336000	330672	398.94	-60.73	-51.52	2.0801	6.1425	2.0529	2.031	2.656
337000	331640	401.56	-58.11	-50.06	1.9883	5.8715	1.9623	1.928	2.522
338000	332609	404.17	-55.50	-48.61	1.9012	5.6142	1.8763	1.831	2.395
339000	333577	406.78	-52.89	-47.16	1.8184	5.3698	1.7946	1.740	2.275
340000	334545	409.39	-50.28	-45.71	1.7398 - 4	5.1375 - 6	1.7170 - 7	1.654 - 8	2.162 - 7
341000	335513	411.99	-47.68	-44.27	1.6650	4.9168	1.6432	1.572	2.056
342000	336481	414.58	-45.09	-42.83	1.5940	4.7070	1.5731	1.495	1.955
343000	337449	417.17	-42.50	-41.39	1.5264	4.5074	1.5064	1.422	1.860
344000	338417	419.75	-39.92	-39.95	1.4621	4.3175	1.4429	1.354	1.770
345000	339385	422.33	-37.34	-38.52	1.4009	4.1367	1.3825	1.289	1.685
346000	340352	424.90	-34.77	-37.09	1.3426	3.9647	1.3250	1.227	1.605
347000	341320	427.47	-32.20	-35.67	1.2871	3.8008	1.2703	1.169	1.528
348000	342287	430.03	-29.64	-34.24	1.2343	3.6447	1.2181	1.114	1.456
349000	343255	432.59	-27.08	-32.82	1.1839	3.4960	1.1684	1.062	1.388
350000	344222	435.14	-24.53	-31.41	1.1359 - 4	3.3542 - 6	1.1210 - 7	1.012 - 8	1.324 - 7
351000	345189	437.69	-21.98	-29.99	1.0901	3.2190	1.0758	9.654 - 9	1.262
352000	346157	440.23	-19.44	-28.58	1.0464	3.0901	1.0327	9.210	1.204
353000	347124	442.76	-16.91	-27.17	1.0048	2.9671	9.9162 - 8	8.789	1.149
354000	348090	445.30	-14.37	-25.76	9.6500 - 5	2.8497	9.5238	8.390	1.097
355000	349057	447.82	-11.85	-24.36	9.2705	2.7376	9.1492	8.011	1.048
356000	350024	450.34	-9.33	-22.96	8.9081	2.6305	8.7916	7.652	1.001
357000	350991	452.86	-6.81	-21.56	8.5619	2.5283	8.4499	7.310	9.559 - 8
358000	351957	455.36	-4.31	-20.17	8.2311	2.4307	8.1235	6.986	9.135
359000	352924	457.87	-1.80	-18.78	7.9150	2.3373	7.8115	6.678	8.732
360000	353890	460.37	0.70	-17.39	7.6129 - 5	2.2481 - 6	7.5133 - 8	6.385 - 9	8.350 - 8
361000	354856	463.15	3.48	-15.84	7.3239	2.1628	7.2282	6.103	7.981
362000	355823	466.34	6.67	-12.94	7.0485	2.0814	6.9564	5.806	7.592
363000	356789	473.53	13.86	-10.08	6.7865	2.0041	6.6978	5.526	7.226
364000	357755	478.70	19.03	-7.20	6.5370	1.9304	6.4516	5.263	6.882
365000	358721	483.87	24.20	-4.33	6.2994	1.8602	6.2170	5.015	6.558
366000	359687	489.04	29.37	-1.46	6.0730	1.7933	5.9935	4.782	6.252
367000	360652	494.19	34.52	1.40	5.8570	1.7296	5.7804	4.561	5.964
368000	361618	499.33	39.66	4.26	5.6510	1.6687	5.5771	4.353	5.692
369000	362584	504.47	44.80	7.11	5.4543	1.6107	5.3830	4.157	5.436
370000	363549	509.60	49.93	9.96	5.2665 - 5	1.5552 - 6	5.1976 - 8	3.971 - 9	5.193 - 8
371000	364514	514.72	55.05	12.81	5.0870	1.5022	5.0205	3.796	4.963
372000	365480	519.84	60.17	15.65	4.9154	1.4515	4.8511	3.630	4.746
373000	366445	524.95	65.28	18.49	4.7513	1.4031	4.6892	3.473	4.541
374000	367410	530.05	70.38	21.32	4.5943	1.3567	4.5343	3.324	4.346
375000	368375	535.14	75.47	24.15	4.4440	1.3123	4.3859	3.183	4.162
376000	369340	540.23	80.56	26.98	4.3001	1.2698	4.2439	3.049	3.987
377000	370305	545.30	85.63	29.80	4.1622	1.2291	4.1078	2.922	3.821
378000	371270	550.37	90.70	32.61	4.0300	1.1901	3.9773	2.802	3.664
379000	372234	555.44	95.77	35.43	3.9033	1.1526	3.8522	2.688	3.514

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
380000	373199	560.49	100.82	38.24	3.7817 - 5	1.1167 - 6	3.7322 - 8	2.579 - 9	3.372 - 8
381000	374163	565.54	105.87	41.04	3.6650	1.0823	3.6170	2.476	3.237
382000	375128	570.59	110.92	43.84	3.5529	1.0492	3.5065	2.378	3.109
383000	376092	575.62	115.95	46.64	3.4453	1.0174	3.4003	2.284	2.987
384000	377056	580.65	120.98	49.43	3.3419	9.8688 - 7	3.2982	2.195	2.871
385000	378020	585.67	126.00	52.22	3.2426	9.5753	3.2002	2.111	2.760
386000	378984	590.68	131.01	55.01	3.1470	9.2932	3.1059	2.030	2.654
387000	379948	595.69	136.02	57.79	3.0551	9.0218	3.0152	1.953	2.554
388000	380912	600.70	141.03	60.57	2.9667	8.7607	2.9279	1.880	2.458
389000	381876	605.69	146.02	63.34	2.8816	8.5094	2.8439	1.810	2.366
390000	382840	610.68	151.01	66.12	2.7997 - 5	8.2675 - 7	2.7631 - 8	1.743 - 9	2.279 - 8
391000	383803	615.66	155.99	68.88	2.7208	8.0344	2.6852	1.679	2.196
392000	384767	620.64	160.97	71.65	2.6447	7.8099	2.6101	1.618	2.116
393000	385730	625.61	165.94	74.41	2.5714	7.5934	2.5378	1.560	2.040
394000	386693	632.16	172.49	78.05	2.5008	7.3849	2.4681	1.500	1.962
395000	387656	642.43	182.76	83.76	2.4331	7.1850	2.4013	1.436	1.877
396000	388620	652.69	193.02	89.46	2.3683	6.9937	2.3374	1.375	1.798
397000	389583	662.94	203.27	95.15	2.3063	6.8104	2.2761	1.317	1.723
398000	390546	673.17	213.50	100.84	2.2468	6.6348	2.2174	1.263	1.652
399000	391508	683.40	223.73	106.52	2.1898	6.4664	2.1611	1.212	1.585
400000	392471	693.61	233.94	112.19	2.1350 - 5	6.3047 - 7	2.1071 - 8	1.164 - 9	1.522 - 8
402000	394396	714.00	254.33	123.52	2.0319	6.0003	2.0054	1.075	1.405
404000	396321	734.36	274.69	134.83	1.9367	5.7189	1.9113	9.947 -10	1.301
406000	398246	754.66	294.99	146.11	1.8484	5.4582	1.8242	9.228	1.207
408000	400170	774.93	315.26	157.37	1.7664	5.2162	1.7433	8.578	1.122
410000	402094	795.16	335.49	168.61	1.6901	4.9910	1.6680	7.990	1.045
412000	404017	815.35	355.68	179.82	1.6190	4.7810	1.5979	7.457	9.751 - 9
414000	405940	835.51	375.84	191.02	1.5527	4.5850	1.5324	6.971	9.115
416000	407863	855.63	395.96	202.20	1.4906	4.4016	1.4711	6.528	8.536
418000	409785	875.72	416.05	213.36	1.4324	4.2298	1.4136	6.123	8.006
420000	411707	895.77	436.10	224.50	1.3777 - 5	4.0685 - 7	1.3597 - 8	5.751 -10	7.521 - 9
422000	413629	915.80	456.13	235.63	1.3264	3.9169	1.3091	5.411	7.075
424000	415550	935.79	476.12	246.74	1.2781	3.7743	1.2614	5.097	6.665
426000	417471	955.76	496.09	257.83	1.2326	3.6398	1.2165	4.808	6.287
428000	419392	975.71	516.04	268.91	1.1896	3.5129	1.1741	4.541	5.938
430000	421312	995.63	535.96	279.98	1.1490	3.3930	1.1340	4.294	5.615
432000	423232	1015.52	555.85	291.03	1.1106	3.2796	1.0961	4.065	5.316
434000	425151	1035.40	575.73	302.07	1.0742	3.1722	1.0602	3.853	5.039
436000	427070	1055.25	595.58	313.10	1.0397	3.0704	1.0261	3.656	4.781
438000	428989	1075.09	615.42	324.12	1.0070	2.9737	9.9384 - 9	3.472	4.541
440000	430907	1094.91	635.24	335.13	9.7591 - 6	2.8819 - 7	9.6315 - 9	3.301 -10	4.317 - 9
442000	432825	1114.71	655.04	346.13	9.4633	2.7945	9.3396	3.142	4.108
444000	434743	1134.49	674.82	357.12	9.1818	2.7114	9.0617	2.993	3.913
446000	436660	1154.26	694.59	368.11	8.9135	2.6322	8.7970	2.853	3.731
448000	438577	1174.02	714.35	379.08	8.6578	2.5566	8.5445	2.722	3.560
450000	440494	1193.77	734.10	390.05	8.4136	2.4845	8.3036	2.600	3.399
452000	442410	1213.50	753.83	401.02	8.1804	2.4157	8.0735	2.485	3.249
454000	444326	1233.22	773.55	411.97	7.9575	2.3499	7.8535	2.376	3.107
456000	446241	1252.93	793.26	422.92	7.7443	2.2869	7.6430	2.275	2.974
458000	448156	1272.63	812.96	433.87	7.5402	2.2266	7.4416	2.179	2.849
460000	450071	1292.32	832.65	444.81	7.3446 - 6	2.1689 - 7	7.2485 - 9	2.088 -10	2.731 - 9
462000	451985	1312.00	852.33	455.74	7.1571	2.1135	7.0635	2.003	2.619
464000	453899	1331.67	872.00	466.66	6.9772	2.0604	6.8860	1.923	2.514
466000	455813	1351.33	891.66	477.59	6.8046	2.0094	6.7156	1.847	2.415
468000	457727	1370.98	911.31	488.50	6.6387	1.9604	6.5519	1.775	2.321
470000	459639	1390.62	930.95	499.41	6.4793	1.9133	6.3946	1.706	2.231
472000	461552	1410.24	950.57	510.32	6.3261	1.8681	6.2433	1.642	2.147
474000	463464	1429.86	970.19	521.21	6.1786	1.8245	6.0978	1.581	2.067
476000	465376	1449.47	989.80	532.11	6.0366	1.7826	5.9576	1.522	1.991
478000	467288	1469.06	1009.39	542.99	5.8998	1.7422	5.8226	1.467	1.918
480000	469199	1488.64	1028.97	553.87	5.7679 - 6	1.7033 - 7	5.6925 - 9	1.415 -10	1.850 - 9
482000	471110	1508.21	1048.54	564.74	5.6408	1.6657	5.5671	1.365	1.785
484000	473020	1527.75	1068.08	575.60	5.5182	1.6295	5.4460	1.317	1.722
486000	474930	1547.30	1087.63	586.46	5.3998	1.5946	5.3292	1.272	1.663
488000	476840	1566.81	1107.14	597.30	5.2855	1.5608	5.2164	1.229	1.607
490000	478749	1586.31	1126.64	608.13	5.1750	1.5282	5.1074	1.188	1.553
492000	480659	1605.80	1146.13	618.96	5.0683	1.4967	5.0020	1.148	1.502
494000	482567	1625.49	1166.82	629.72	4.9649	1.4661	4.9000	1.114	1.457
496000	484476	1645.16	1187.51	640.59	4.8647	1.4365	4.8010	1.081	1.414
498000	486383	1664.91	1208.26	651.41	4.7673	1.4078	4.7050	1.050	1.373
500000	488291	1684.64	1229.01	662.22	4.6728 - 6	1.3799 - 7	4.6117 - 9	1.020 -10	1.333 - 9
502000	490198	1704.36	1249.75	673.00	4.5810	1.3528	4.5211	9.905 -11	1.295
504000	492105	1724.06	1270.49	683.77	4.4919	1.3265	4.4331	9.625	1.259
506000	494012	1743.75	1291.22	694.54	4.4053	1.3009	4.3477	9.355	1.223
508000	495918	1763.43	1311.95	705.29	4.3211	1.2760	4.2646	9.095	1.189
510000	497824	1783.11	1332.68	716.04	4.2392	1.2518	4.1838	8.845	1.157
512000	499729	1802.78	1353.41	726.79	4.1596	1.2283	4.1053	8.603	1.125
514000	501634	1822.44	1374.14	737.54	4.0822	1.2055	4.0289	8.370	1.095
516000	503539	1842.11	1394.87	748.29	4.0069	1.1832	3.9545	8.146	1.065
518000	505443	1861.77	1415.60	759.02	3.9337	1.1616	3.8822	7.929	1.037

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
520000	507347	1805.39	1345.72	729.85	3.8623 - 6	1.1405 - 7	3.8118 - 9	7.720 -11	1.009 - 9
522000	509251	1819.45	1359.78	737.65	3.7929	1.1200	3.7433	7.518	9.830 -10
524000	511154	1833.47	1373.80	745.44	3.7253	1.1001	3.6766	7.323	9.575
526000	513057	1844.78	1385.11	751.73	3.6594	1.0806	3.6115	7.145	9.343
528000	514960	1853.70	1394.03	756.68	3.5951	1.0616	3.5480	6.981	9.128
530000	516862	1862.62	1402.95	761.64	3.5322	1.0431	3.4860	6.822	8.920
532000	518764	1871.52	1411.85	766.58	3.4708	1.0249	3.4254	6.667	8.718
534000	520666	1880.40	1420.73	771.52	3.4108	1.0072	3.3662	6.517	8.521
536000	522567	1889.27	1429.60	776.45	3.3521	9.8988 - 8	3.3083	6.370	8.330
538000	524468	1898.14	1438.47	781.37	3.2948	9.7295	3.2517	6.228	8.144
540000	526368	1907.00	1447.33	786.30	3.2388 - 6	9.5640 - 8	3.1964 - 9	6.090 -11	7.964 -10
542000	528268	1915.86	1456.19	791.22	3.1840	9.4022	3.1423	5.956	7.788
544000	530168	1924.71	1465.04	796.14	3.1304	9.2440	3.0895	5.825	7.617
546000	532067	1933.58	1473.91	801.06	3.0780	9.0893	3.0377	5.698	7.450
548000	533966	1942.46	1482.79	806.00	3.0268	8.9380	2.9872	5.574	7.289
550000	535865	1951.36	1491.69	810.94	2.9766	8.7900	2.9377	5.453	7.131
552000	537764	1960.28	1500.61	815.89	2.9276	8.6452	2.8893	5.336	6.978
554000	539662	1969.25	1509.58	820.88	2.8796	8.5035	2.8420	5.222	6.829
556000	541559	1978.24	1518.57	825.87	2.8327	8.3649	2.7956	5.111	6.683
558000	543456	1987.24	1527.57	830.87	2.7867	8.2293	2.7503	5.004	6.543
560000	545353	1996.25	1536.58	835.88	2.7417 - 6	8.0964 - 8	2.7059 - 9	4.906 -11	6.415 -10
562000	547250	2005.26	1545.59	840.89	2.6976	7.9661	2.6624	4.810	6.290
564000	549146	2014.28	1554.60	845.90	2.6544	7.8384	2.6197	4.716	6.167
566000	551042	2023.30	1563.61	850.91	2.6120	7.7132	2.5778	4.625	6.048
568000	552937	2032.33	1572.62	855.92	2.5704	7.5905	2.5368	4.535	5.931
570000	554833	2041.36	1581.63	860.93	2.5297	7.4701	2.4966	4.448	5.817
572000	556727	2050.40	1590.64	865.94	2.4897	7.3521	2.4571	4.363	5.705
574000	558622	2059.44	1600.65	870.95	2.4505	7.2364	2.4185	4.279	5.596
576000	560516	2068.48	1610.66	875.96	2.4121	7.1228	2.3805	4.198	5.489
578000	562410	2077.53	1620.67	880.97	2.3744	7.0115	2.3433	4.118	5.385
580000	564303	2086.58	1630.68	885.98	2.3374 - 6	6.9023 - 8	2.3068 - 9	4.040 -11	5.283 -10
582000	566196	2095.63	1640.69	890.99	2.3011	6.7952	2.2710	3.964	5.184
584000	568089	2104.68	1650.70	895.99	2.2655	6.6901	2.2359	3.890	5.086
586000	569981	2113.73	1660.71	900.99	2.2306	6.5870	2.2014	3.817	4.991
588000	571873	2122.78	1670.72	905.99	2.1964	6.4859	2.1676	3.746	4.898
590000	573765	2131.83	1680.73	910.99	2.1628	6.3866	2.1345	3.676	4.807
592000	575656	2140.88	1690.74	915.99	2.1298	6.2892	2.1019	3.608	4.718
594000	577547	2149.93	1700.75	920.99	2.0974	6.1937	2.0700	3.541	4.631
596000	579437	2158.98	1710.76	925.99	2.0657	6.0999	2.0386	3.476	4.546
598000	581328	2168.03	1720.77	930.99	2.0345	6.0078	2.0079	3.413	4.462
600000	583217	2177.08	1730.78	935.99	2.0039 - 6	5.9175 - 8	1.9777 - 9	3.350 -11	4.381 -10
602000	585107	2186.13	1740.79	940.99	1.9738	5.8288	1.9480	3.289	4.301
604000	586996	2195.18	1750.80	945.99	1.9444	5.7417	1.9189	3.230	4.223
606000	588885	2204.23	1760.81	950.99	1.9154	5.6563	1.8904	3.171	4.147
608000	590773	2213.28	1770.82	955.99	1.8870	5.5723	1.8623	3.114	4.072
610000	592661	2222.33	1780.83	960.99	1.8591	5.4900	1.8348	3.058	3.999
612000	594549	2231.38	1790.84	965.99	1.8317	5.4091	1.8078	3.003	3.927
614000	596437	2240.43	1800.85	970.99	1.8048	5.3296	1.7812	2.950	3.857
616000	598324	2249.48	1810.86	975.99	1.7784	5.2517	1.7552	2.897	3.789
618000	600210	2258.53	1820.87	980.99	1.7525	5.1751	1.7296	2.846	3.721
620000	602097	2267.58	1830.88	985.99	1.7270 - 6	5.0998 - 8	1.7044 - 9	2.796 -11	3.656 -10
622000	603983	2276.63	1840.89	990.99	1.7020	5.0259	1.6797	2.746	3.591
624000	605868	2285.68	1850.90	995.99	1.6774	4.9534	1.6555	2.699	3.529
626000	607753	2294.73	1860.91	1000.99	1.6532	4.8820	1.6316	2.654	3.471
628000	609638	2303.78	1870.92	1005.99	1.6295	4.8119	1.6082	2.610	3.413
630000	611523	2312.83	1880.93	1010.99	1.6061	4.7429	1.5851	2.567	3.357
632000	613407	2321.88	1890.94	1015.99	1.5832	4.6751	1.5625	2.525	3.301
634000	615291	2330.93	1900.95	1020.99	1.5606	4.6084	1.5402	2.483	3.247
636000	617175	2339.98	1910.96	1025.99	1.5384	4.5428	1.5183	2.442	3.194
638000	619058	2349.03	1920.97	1030.99	1.5165	4.4783	1.4967	2.402	3.141
640000	620941	2358.08	1930.98	1035.99	1.4951 - 6	4.4149 - 8	1.4755 - 9	2.363 -11	3.090 -10
642000	622823	2367.13	1940.99	1040.99	1.4739	4.3525	1.4547	2.324	3.039
644000	624705	2376.18	1950.99	1045.99	1.4532	4.2912	1.4342	2.287	2.990
646000	626587	2385.23	1960.99	1050.99	1.4327	4.2308	1.4140	2.249	2.941
648000	628468	2394.28	1970.99	1055.99	1.4126	4.1715	1.3941	2.213	2.894
650000	630349	2403.33	1980.99	1060.99	1.3928	4.1131	1.3746	2.177	2.847
652000	632230	2412.38	1990.99	1065.99	1.3734	4.0557	1.3554	2.142	2.801
654000	634111	2421.43	2000.99	1070.99	1.3543	3.9992	1.3366	2.108	2.756
656000	635991	2430.48	2010.99	1075.99	1.3354	3.9436	1.3180	2.074	2.712
658000	637870	2439.53	2020.99	1080.99	1.3169	3.8889	1.2997	2.041	2.669
660000	639750	2448.58	2030.99	1085.99	1.2987 - 6	3.8351 - 8	1.2817 - 9	2.008 -11	2.626 -10
662000	641629	2457.63	2040.99	1090.99	1.2808	3.7822	1.2640	1.976	2.584
664000	643507	2466.68	2050.99	1095.99	1.2632	3.7301	1.2466	1.945	2.543
666000	645385	2475.73	2060.99	1100.99	1.2458	3.6789	1.2295	1.914	2.503
668000	647263	2484.78	2070.99	1105.99	1.2287	3.6285	1.2127	1.884	2.463
670000	649141	2493.83	2080.99	1110.99	1.2119	3.5789	1.1961	1.854	2.424
672000	651018	2502.88	2090.99	1115.99	1.1954	3.5300	1.1798	1.825	2.386
674000	652895	2511.93	2100.99	1120.99	1.1791	3.4820	1.1637	1.796	2.349
676000	654772	2520.98	2110.99	1125.99	1.1631	3.4347	1.1479	1.768	2.312
678000	656648	2530.03	2120.99	1130.99	1.1474	3.3882	1.1324	1.740	2.276

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
680000	658524	2263.51	1803.84	984.35	1.1319 - 6	3.3424 - 8	1.1171 - 9	1.713 -11	2.240 -10
682000	660399	2266.72	1807.05	986.14	1.1166	3.2973	1.1020	1.686	2.205
684000	662274	2269.93	1810.26	987.92	1.1016	3.2530	1.0872	1.660	2.171
686000	664149	2273.13	1813.46	989.70	1.0868	3.2093	1.0726	1.634	2.137
688000	666023	2276.33	1816.66	991.48	1.0722	3.1663	1.0582	1.609	2.104
690000	667897	2279.52	1819.85	993.25	1.0579	3.1240	1.0441	1.584	2.072
692000	669771	2282.70	1823.03	995.02	1.0438	3.0824	1.0302	1.560	2.040
694000	671645	2285.88	1826.21	996.78	1.0299	3.0414	1.0165	1.536	2.008
696000	673518	2289.05	1829.38	998.55	1.0163	3.0010	1.0030	1.512	1.978
698000	675390	2292.22	1832.55	1000.30	1.0028	2.9613	9.8969 -10	1.489	1.947
700000	677263	2295.37	1835.70	1002.06	9.8955 - 7	2.9221 - 8	9.7661 -10	1.467 -11	1.918 -10
702000	679135	2298.53	1838.86	1003.81	9.7651	2.8836	9.6374	1.444	1.888
704000	681006	2301.67	1842.00	1005.56	9.6366	2.8457	9.5106	1.422	1.860
706000	682878	2304.81	1845.14	1007.30	9.5102	2.8083	9.3858	1.401	1.832
708000	684749	2307.94	1848.27	1009.04	9.3856	2.7716	9.2629	1.380	1.804
710000	686619	2311.07	1851.40	1010.78	9.2630	2.7354	9.1419	1.359	1.777
712000	688489	2314.19	1854.52	1012.51	9.1423	2.6997	9.0227	1.338	1.750
714000	690359	2317.30	1857.63	1014.24	9.0234	2.6646	8.9054	1.318	1.724
716000	692229	2320.41	1860.74	1015.97	8.9062	2.6300	8.7898	1.298	1.698
718000	694098	2323.51	1863.84	1017.69	8.7909	2.5960	8.6760	1.279	1.672
720000	695967	2326.60	1866.93	1019.41	8.6773 - 7	2.5624 - 8	8.5639 -10	1.260 -11	1.647 -10
722000	697836	2329.69	1870.02	1021.12	8.5655	2.5294	8.4535	1.241	1.623
724000	699704	2332.77	1873.10	1022.83	8.4553	2.4968	8.3447	1.223	1.599
726000	701572	2335.84	1876.17	1024.54	8.3468	2.4648	8.2376	1.204	1.575
728000	703439	2338.91	1879.24	1026.24	8.2398	2.4332	8.1321	1.187	1.552
730000	705306	2341.97	1882.30	1027.94	8.1345	2.4021	8.0282	1.169	1.529
732000	707173	2345.02	1885.35	1029.64	8.0308	2.3715	7.9258	1.152	1.506
734000	709040	2348.07	1888.40	1031.33	7.9286	2.3413	7.8250	1.135	1.484
736000	710906	2351.11	1891.44	1033.02	7.8280	2.3116	7.7256	1.118	1.462
738000	712771	2354.15	1894.48	1034.71	7.7288	2.2823	7.6277	1.102	1.441
740000	714637	2357.17	1897.50	1036.39	7.6311 - 7	2.2535 - 8	7.5313 -10	1.086 -11	1.420 -10
742000	716502	2360.19	1900.52	1038.07	7.5349	2.2250	7.4363	1.070	1.399
744000	718367	2363.21	1903.54	1039.74	7.4400	2.1970	7.3427	1.054	1.379
746000	720231	2366.22	1906.55	1041.42	7.3466	2.1694	7.2505	1.039	1.359
748000	722095	2369.22	1909.55	1043.08	7.2545	2.1423	7.1596	1.024	1.339
750000	723959	2372.21	1912.54	1044.75	7.1638	2.1155	7.0701	1.009	1.320
752000	725822	2375.20	1915.53	1046.41	7.0744	2.0891	6.9819	9.947 -12	1.301
754000	727685	2378.18	1918.51	1048.06	6.9863	2.0631	6.8949	9.804	1.282
756000	729548	2380.50	1920.83	1049.35	6.8995	2.0374	6.8093	9.666	1.264
758000	731410	2382.53	1922.86	1050.48	6.8139	2.0121	6.7248	9.531	1.246
760000	733272	2384.56	1924.89	1051.61	6.7295 - 7	1.9872 - 8	6.6415 -10	9.398 -12	1.229 -10
762000	735134	2386.58	1926.91	1052.73	6.6463	1.9627	6.5594	9.268	1.212
764000	736995	2388.60	1928.93	1053.85	6.5643	1.9384	6.4785	9.139	1.195
766000	738856	2390.62	1930.95	1054.97	6.4835	1.9146	6.3987	9.012	1.178
768000	740716	2392.62	1932.95	1056.08	6.4037	1.8910	6.3200	8.888	1.162
770000	742577	2394.62	1934.95	1057.20	6.3251	1.8678	6.2424	8.765	1.146
772000	744436	2396.62	1936.95	1058.31	6.2476	1.8449	6.1659	8.644	1.130
774000	746296	2398.61	1938.94	1059.41	6.1712	1.8223	6.0905	8.525	1.115
776000	748155	2400.60	1940.93	1060.52	6.0958	1.8001	6.0161	8.408	1.099
778000	750014	2402.58	1942.91	1061.62	6.0215	1.7781	5.9427	8.293	1.084
780000	751873	2404.55	1944.88	1062.71	5.9482 - 7	1.7565 - 8	5.8704 -10	8.179 -12	1.070 -10
782000	753731	2406.52	1946.85	1063.81	5.8759	1.7352	5.7991	8.067	1.055
784000	755589	2408.49	1948.82	1064.90	5.8047	1.7141	5.7288	7.957	1.040
786000	757446	2410.44	1950.77	1065.99	5.7344	1.6934	5.6594	7.849	1.026
788000	759303	2412.40	1952.73	1067.07	5.6651	1.6729	5.5910	7.742	1.012
790000	761160	2414.34	1954.67	1068.15	5.5967	1.6527	5.5235	7.637	9.986 -11
792000	763017	2416.29	1956.62	1069.23	5.5293	1.6328	5.4570	7.533	9.851
794000	764873	2418.22	1958.55	1070.31	5.4628	1.6132	5.3914	7.431	9.717
796000	766728	2420.15	1960.48	1071.38	5.3972	1.5938	5.3266	7.331	9.586
798000	768584	2422.08	1962.41	1072.45	5.3325	1.5747	5.2628	7.232	9.457
800000	770439	2424.00	1964.33	1073.52	5.2687 - 7	1.5559 - 8	5.1998 -10	7.135 -12	9.330 -11
805000	775075	2428.78	1969.11	1076.17	5.1130	1.5099	5.0461	6.898	9.020
810000	779709	2433.52	1973.85	1078.81	4.9625	1.4654	4.8976	6.669	8.721
815000	784341	2438.23	1978.56	1081.42	4.8170	1.4225	4.7540	6.450	8.434
820000	788971	2442.90	1983.23	1084.02	4.6764	1.3809	4.6153	6.238	8.157
825000	793599	2447.54	1987.87	1086.60	4.5405	1.3408	4.4811	6.034	7.890
830000	798224	2452.15	1992.48	1089.16	4.4090	1.3020	4.3514	5.838	7.633
835000	802848	2456.72	1997.05	1091.70	4.2819	1.2644	4.2259	5.648	7.386
840000	807469	2461.26	2001.59	1094.22	4.1590	1.2281	4.1046	5.466	7.147
845000	812088	2465.76	2006.09	1096.72	4.0400	1.1930	3.9872	5.290	6.918
850000	816705	2470.23	2010.56	1099.20	3.9250 - 7	1.1590 - 8	3.8736 -10	5.121 -12	6.696 -11
855000	821320	2474.67	2015.00	1101.66	3.8136	1.1262	3.7638	4.957	6.482
860000	825933	2479.07	2019.40	1104.11	3.7059	1.0944	3.6574	4.800	6.276
865000	830543	2483.43	2023.76	1106.54	3.6016	1.0636	3.5545	4.648	6.078
870000	835152	2487.77	2028.10	1108.94	3.5007	1.0338	3.4549	4.501	5.886
875000	839758	2492.07	2032.40	1111.33	3.4030	1.0049	3.3585	4.360	5.701
880000	844362	2496.33	2036.66	1113.70	3.3084	9.7697 - 9	3.2651	4.224	5.523
885000	848964	2500.56	2040.89	1116.05	3.2168	9.4991	3.1747	4.092	5.351
890000	853564	2504.76	2045.09	1118.38	3.1281	9.2371	3.0872	3.965	5.185
895000	858162	2508.93	2049.26	1120.70	3.0421	8.9834	3.0023	3.842	5.024



TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
900000	862758	2513.06	2053.39	1122.99	2.9589 - 7	8.7376 - 9	2.9202 -10	3.724 -12	4.870 -11
905000	867352	2517.16	2057.49	1125.27	2.8782	8.4994	2.8406	3.610	4.720
910000	871943	2521.22	2061.55	1127.53	2.8001	8.2687	2.7635	3.500	4.576
915000	876533	2525.25	2065.58	1129.77	2.7244	8.0451	2.6887	3.393	4.437
920000	881120	2529.25	2069.58	1131.99	2.6510	7.8284	2.6163	3.290	4.302
925000	885705	2533.22	2073.55	1134.19	2.5798	7.6183	2.5461	3.191	4.172
930000	890289	2537.15	2077.48	1136.38	2.5109	7.4147	2.4781	3.095	4.047
935000	894870	2541.06	2081.39	1138.55	2.4440	7.2172	2.4121	3.002	3.925
940000	899449	2544.92	2085.25	1140.70	2.3792	7.0258	2.3481	2.912	3.808
945000	904025	2548.76	2089.09	1142.83	2.3163	6.8402	2.2861	2.826	3.695
950000	908600	2552.57	2092.90	1144.94	2.2554 - 7	6.6601 - 9	2.2259 -10	2.742 -12	3.585 -11
955000	913173	2556.34	2096.67	1147.04	2.1962	6.4855	2.1675	2.661	3.480
960000	917743	2560.08	2100.41	1149.12	2.1389	6.3161	2.1109	2.583	3.377
965000	922312	2563.80	2104.13	1151.18	2.0832	6.1517	2.0560	2.507	3.278
970000	926878	2567.48	2107.81	1153.23	2.0292	5.9922	2.0027	2.434	3.182
975000	931442	2571.13	2111.46	1155.25	1.9768	5.8374	1.9509	2.363	3.090
980000	936004	2574.75	2115.08	1157.26	1.9259	5.6872	1.9007	2.294	3.000
985000	940564	2578.31	2118.44	1159.13	1.8766	5.5415	1.8520	2.228	2.914
990000	945122	2580.17	2120.50	1160.28	1.8286	5.3999	1.8047	2.166	2.832
995000	949678	2582.21	2122.54	1161.41	1.7820	5.2624	1.7587	2.105	2.752
1000000	954232	2584.22	2124.55	1162.53	1.7368 - 7	5.1288 - 9	1.7141 -10	2.046 -12	2.675 -11
1005000	958784	2588.21	2128.54	1163.63	1.6928	4.9990	1.6707	1.988	2.600
1010000	963333	2588.18	2128.51	1164.73	1.6501	4.8728	1.6286	1.933	2.528
1015000	967881	2590.12	2130.45	1165.81	1.6086	4.7503	1.5876	1.879	2.457
1020000	972426	2592.04	2132.37	1166.87	1.5683	4.6312	1.5478	1.827	2.389
1025000	976970	2593.94	2134.27	1167.93	1.5291	4.5154	1.5091	1.777	2.323
1030000	981511	2595.82	2136.15	1168.97	1.4910	4.4029	1.4715	1.728	2.259
1035000	986050	2597.67	2138.00	1170.00	1.4540	4.2936	1.4350	1.680	2.197
1040000	990588	2599.51	2139.84	1171.02	1.4180	4.1873	1.3994	1.634	2.137
1045000	995123	2601.32	2141.65	1172.03	1.3830	4.0839	1.3649	1.590	2.079
1050000	999656	2603.11	2143.44	1173.02	1.3489 - 7	3.9834 - 9	1.3313 -10	1.547 -12	2.022 -11
1055000	1004187	2604.88	2145.21	1174.01	1.3158	3.8856	1.2986	1.505	1.968
1060000	1008715	2606.63	2146.96	1174.98	1.2836	3.7906	1.2669	1.464	1.914
1065000	1013242	2608.36	2148.69	1175.94	1.2523	3.6982	1.2360	1.425	1.863
1070000	1017767	2610.07	2150.40	1176.89	1.2219	3.6083	1.2059	1.386	1.813
1075000	1022290	2611.77	2152.10	1177.83	1.1923	3.5208	1.1767	1.349	1.764
1080000	1026810	2613.44	2153.77	1178.76	1.1635	3.4357	1.1483	1.313	1.717
1085000	1031329	2615.10	2155.43	1179.68	1.1354	3.3530	1.1206	1.278	1.671
1090000	1035845	2616.73	2157.06	1180.59	1.1082	3.2724	1.0937	1.244	1.627
1095000	1040360	2618.35	2158.68	1181.49	1.0816	3.1941	1.0675	1.211	1.584
1100000	1044872	2619.95	2160.28	1182.38	1.0558 - 7	3.1178 - 9	1.0420 -10	1.179 -12	1.542 -11
1105000	1049382	2621.54	2161.87	1183.26	1.0307	3.0436	1.0172	1.148	1.501
1110000	1053891	2623.11	2163.44	1184.13	1.0062	2.9714	9.9306 -11	1.118	1.462
1115000	1058397	2624.66	2164.99	1184.99	9.8242 - 8	2.9011	9.6957	1.089	1.424
1120000	1062901	2626.19	2166.52	1185.85	9.5924	2.8326	9.4670	1.060	1.387
1125000	1067403	2627.72	2168.05	1186.69	9.3668	2.7660	9.2443	1.033	1.351
1130000	1071903	2629.22	2169.55	1187.53	9.1471	2.7012	9.0275	1.006	1.316
1135000	1076401	2630.71	2171.04	1188.36	8.9333	2.6380	8.8165	9.801 -13	1.282
1140000	1080897	2632.19	2172.52	1189.18	8.7250	2.5765	8.6109	9.548	1.249
1145000	1085391	2633.65	2173.98	1189.99	8.5222	2.5166	8.4108	9.303	1.216
1150000	1089883	2635.10	2175.43	1190.79	8.3247 - 8	2.4583 - 9	8.2159 -11	9.064 -13	1.185 -11
1155000	1094373	2636.53	2176.86	1191.59	8.1324	2.4015	8.0260	8.833	1.155
1160000	1098861	2637.95	2178.28	1192.38	7.9450	2.3462	7.8411	8.607	1.126
1165000	1103346	2639.36	2179.69	1193.16	7.7625	2.2923	7.6610	8.389	1.097
1170000	1107830	2640.76	2181.09	1193.94	7.5847	2.2398	7.4855	8.176	1.069
1175000	1112312	2642.15	2182.48	1194.71	7.4115	2.1886	7.3146	7.970	1.042
1180000	1116792	2643.52	2183.85	1195.47	7.2427	2.1388	7.1480	7.769	1.016
1185000	1121269	2644.89	2185.22	1196.23	7.0783	2.0902	6.9857	7.574	9.903 -12
1190000	1125745	2646.24	2186.57	1196.98	6.9180	2.0429	6.8276	7.384	9.655
1195000	1130218	2647.58	2187.91	1197.73	6.7619	1.9968	6.6734	7.199	9.414
1200000	1134690	2648.92	2189.25	1198.47	6.6096 - 8	1.9518 - 9	6.5232 -11	7.020 -13	9.180 -12
1205000	1139159	2650.24	2190.57	1199.21	6.4613	1.9080	6.3768	6.846	8.952
1210000	1143627	2651.56	2191.89	1199.94	6.3167	1.8653	6.2341	6.676	8.730
1215000	1148092	2652.87	2193.20	1200.66	6.1757	1.8237	6.0950	6.511	8.514
1220000	1152556	2654.17	2194.50	1201.39	6.0383	1.7831	5.9593	6.351	8.304
1225000	1157017	2655.46	2195.79	1202.11	5.9043	1.7435	5.8271	6.195	8.101
1230000	1161476	2656.74	2197.07	1202.82	5.7737	1.7050	5.6982	6.043	7.902
1235000	1165934	2658.02	2198.35	1203.53	5.6463	1.6673	5.5724	5.895	7.709
1240000	1170389	2659.30	2199.63	1204.24	5.5220	1.6307	5.4498	5.752	7.521
1245000	1174842	2660.56	2200.89	1204.94	5.4009	1.5949	5.3303	5.612	7.339
1250000	1179294	2661.82	2202.15	1205.64	5.2827 - 8	1.5600 - 9	5.2137 -11	5.476 -13	7.161 -12
1255000	1183743	2663.08	2203.41	1206.34	5.1675	1.5260	5.0999	5.344	6.988
1260000	1188190	2664.33	2204.66	1207.04	5.0551	1.4928	4.9890	5.215	6.820
1265000	1192635	2665.58	2205.91	1207.73	4.9454	1.4604	4.8807	5.090	6.656
1270000	1197079	2666.83	2207.16	1208.42	4.8384	1.4288	4.7752	4.968	6.496
1275000	1201520	2668.07	2208.40	1209.11	4.7341	1.3980	4.6722	4.849	6.341
1280000	1205959	2669.31	2209.64	1209.80	4.6322	1.3679	4.5716	4.734	6.190
1285000	1210396	2670.54	2210.87	1210.48	4.5328	1.3385	4.4736	4.621	6.043
1290000	1214832	2671.78	2212.11	1211.17	4.4359	1.3099	4.3779	4.512	5.900
1295000	1219265	2673.01	2213.34	1211.86	4.3412	1.2820	4.2845	4.405	5.760

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
1300000	1223696	2674.24	2214.57	1212.54	4.2489 - 8	1.2547 - 9	4.1933 -11	4.301 -13	5.625 -12
1305000	1228125	2675.47	2215.80	1213.22	4.1587	1.2281	4.1044	4.200	5.492
1310000	1232552	2676.70	2217.03	1213.91	4.0708	1.2021	4.0175	4.102	5.364
1315000	1236978	2677.23	2217.56	1214.20	3.9849	1.1767	3.9328	4.007	5.240
1320000	1241401	2677.15	2217.48	1214.15	3.9010	1.1520	3.8500	3.915	5.120
1325000	1245822	2677.07	2217.40	1214.11	3.8190	1.1278	3.7691	3.826	5.003
1330000	1250241	2676.99	2217.32	1214.07	3.7390	1.1041	3.6901	3.739	4.890
1335000	1254658	2676.93	2217.26	1214.03	3.6608	1.0810	3.6129	3.654	4.779
1340000	1259074	2676.87	2217.20	1214.00	3.5844	1.0585	3.5376	3.572	4.670
1345000	1263487	2676.82	2217.15	1213.97	3.5098	1.0364	3.4639	3.491	4.565
1350000	1267898	2676.77	2217.10	1213.95	3.4369 - 8	1.0149 - 9	3.3920 -11	3.412 -13	4.462 -12
1355000	1272307	2676.74	2217.07	1213.93	3.3657	9.9389 r10	3.3217	3.336	4.362
1360000	1276715	2676.71	2217.04	1213.91	3.2961	9.7334	3.2530	3.261	4.264
1365000	1281120	2676.69	2217.02	1213.90	3.2281	9.5326	3.1859	3.188	4.168
1370000	1285523	2676.68	2217.01	1213.90	3.1616	9.3363	3.1203	3.116	4.075
1375000	1289925	2676.69	2217.02	1213.90	3.0967	9.1446	3.0562	3.047	3.984
1380000	1294324	2676.70	2217.03	1213.90	3.0332	8.9572	2.9936	2.979	3.896
1385000	1298721	2676.72	2217.05	1213.92	2.9712	8.7740	2.9324	2.913	3.809
1390000	1303117	2676.75	2217.08	1213.93	2.9106	8.5950	2.8725	2.848	3.725
1395000	1307510	2676.79	2217.12	1213.96	2.8513	8.4200	2.8140	2.786	3.642
1400000	1311902	2676.85	2217.18	1213.99	2.7934 - 8	8.2490 -10	2.7569 -11	2.724 -13	3.562 -12
1405000	1316291	2676.91	2217.24	1214.02	2.7368	8.0817	2.7010	2.664	3.484
1410000	1320679	2676.99	2217.32	1214.07	2.6814	7.9183	2.6464	2.606	3.407
1415000	1325064	2677.08	2217.41	1214.12	2.6273	7.7585	2.5930	2.549	3.333
1420000	1329448	2677.19	2217.52	1214.18	2.5744	7.6023	2.5408	2.493	3.260
1425000	1333829	2677.30	2217.63	1214.24	2.5227	7.4495	2.4897	2.438	3.189
1430000	1338209	2677.43	2217.76	1214.31	2.4721	7.3002	2.4398	2.385	3.119
1435000	1342586	2677.58	2217.91	1214.39	2.4227	7.1542	2.3910	2.334	3.051
1440000	1346962	2677.73	2218.06	1214.48	2.3743	7.0114	2.3433	2.283	2.985
1445000	1351336	2677.90	2218.23	1214.57	2.3270	6.8717	2.2966	2.234	2.921
1450000	1355708	2678.09	2218.42	1214.68	2.2808 - 8	6.7352 -10	2.2510 -11	2.185 -13	2.858 -12
1455000	1360077	2678.29	2218.62	1214.79	2.2356	6.6016	2.2063	2.138	2.796
1460000	1364445	2678.51	2218.84	1214.91	2.1913	6.4710	2.1627	2.092	2.736
1465000	1368811	2678.74	2219.07	1215.04	2.1481	6.3432	2.1200	2.047	2.677
1470000	1373175	2678.99	2219.32	1215.18	2.1057	6.2182	2.0782	2.004	2.620
1475000	1377537	2679.25	2219.58	1215.32	2.0643	6.0960	2.0373	1.961	2.564
1480000	1381897	2679.53	2219.86	1215.48	2.0238	5.9764	1.9974	1.919	2.509
1485000	1386255	2679.83	2220.16	1215.65	1.9842	5.8594	1.9583	1.878	2.456
1490000	1390611	2680.15	2220.48	1215.82	1.9455	5.7449	1.9200	1.838	2.404
1495000	1394965	2680.48	2220.81	1216.00	1.9075	5.6330	1.8826	1.799	2.353
1500000	1399317	2680.83	2221.16	1216.20	1.8704 - 8	5.5234 -10	1.8460 -11	1.761 -13	2.303 -12
1505000	1403668	2681.19	2221.52	1216.40	1.8341	5.4162	1.8102	1.724	2.255
1510000	1408016	2681.58	2221.91	1216.61	1.7986	5.3113	1.7751	1.688	2.207
1515000	1412362	2681.98	2222.31	1216.84	1.7639	5.2087	1.7408	1.653	2.161
1520000	1416707	2682.40	2222.73	1217.07	1.7298	5.1082	1.7072	1.618	2.116
1525000	1421049	2682.84	2223.17	1217.32	1.6966	5.0099	1.6744	1.584	2.071
1530000	1425390	2683.30	2223.63	1217.57	1.6640	4.9137	1.6422	1.551	2.028
1535000	1429728	2683.78	2224.11	1217.84	1.6321	4.8196	1.6108	1.519	1.986
1540000	1434065	2684.27	2224.60	1218.11	1.6009	4.7274	1.5800	1.487	1.945
1545000	1438400	2684.79	2225.12	1218.40	1.5703	4.6372	1.5498	1.456	1.904
1550000	1442733	2685.32	2225.65	1218.70	1.5404 - 8	4.5489 -10	1.5203 -11	1.426 -13	1.865 -12
1555000	1447063	2685.88	2226.21	1219.01	1.5112	4.4625	1.4914	1.397	1.826
1560000	1451392	2686.45	2226.78	1219.32	1.4825	4.3779	1.4631	1.368	1.789
1565000	1455719	2687.05	2227.38	1219.66	1.4545	4.2951	1.4355	1.340	1.752
1570000	1460044	2687.67	2228.00	1220.00	1.4270	4.2140	1.4084	1.312	1.716
1575000	1464367	2688.30	2228.63	1220.35	1.4001	4.1346	1.3818	1.285	1.681
1580000	1468689	2688.96	2229.29	1220.72	1.3738	4.0569	1.3558	1.259	1.647
1585000	1473008	2689.64	2229.97	1221.09	1.3480	3.9808	1.3304	1.234	1.613
1590000	1477325	2690.34	2230.67	1221.48	1.3228	3.9062	1.3055	1.208	1.580
1595000	1481641	2691.06	2231.39	1221.88	1.2981	3.8333	1.2811	1.184	1.548
1600000	1485954	2691.80	2232.13	1222.30	1.2739 - 8	3.7618 -10	1.2572 -11	1.160 -13	1.517 -12
1605000	1490266	2692.57	2232.90	1222.72	1.2502	3.6918	1.2338	1.136	1.486
1610000	1494575	2693.35	2233.68	1223.16	1.2270	3.6233	1.2109	1.113	1.456
1615000	1498883	2694.16	2234.49	1223.60	1.2042	3.5561	1.1885	1.091	1.427
1620000	1503189	2694.99	2235.32	1224.07	1.1820	3.4904	1.1665	1.069	1.398
1625000	1507493	2695.84	2236.17	1224.54	1.1602	3.4260	1.1450	1.048	1.370
1630000	1511795	2696.71	2237.04	1225.02	1.1388	3.3629	1.1239	1.027	1.342
1635000	1516095	2697.61	2237.94	1225.52	1.1179	3.3011	1.1033	1.006	1.316
1640000	1520393	2698.52	2238.85	1226.03	1.0974	3.2406	1.0830	9.861 -14	1.289
1645000	1524689	2699.06	2238.39	1225.77	1.0773	3.1813	1.0632	9.669	1.264
1650000	1528983	2697.50	2237.83	1225.46	1.0576 - 8	3.1231 -10	1.0438 -11	9.482 -14	1.240 -12
1655000	1533276	2696.96	2237.29	1225.16	1.0383	3.0661	1.0247	9.299	1.216
1660000	1537566	2696.45	2236.78	1224.88	1.0194	3.0103	1.0061	9.120	1.193
1665000	1541855	2695.97	2236.30	1224.61	1.0008	2.9555	9.8775 -12	8.945	1.170
1670000	1546142	2695.51	2235.84	1224.36	9.8266 - 9	2.9018	9.6981	8.773	1.147
1675000	1550426	2695.08	2235.41	1224.12	9.6484	2.8492	9.5222	8.605	1.125
1680000	1554709	2694.68	2235.01	1223.89	9.4736	2.7976	9.3497	8.440	1.104
1685000	1558990	2694.30	2234.63	1223.68	9.3023	2.7470	9.1806	8.278	1.083
1690000	1563269	2693.94	2234.27	1223.49	9.1343	2.6974	9.0148	8.120	1.062
1695000	1567546	2693.62	2233.95	1223.30	8.9696	2.6487	8.8523	7.965	1.042

TABLE IV.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
1700000	1571822	2693.32	2233.65	1223.14	8.8081 - 9	2.6010 -10	8.6929 -12	7.814 -14	1.022 -12
1705000	1576095	2693.04	2233.37	1222.98	8.6497	2.5543	8.5366	7.665	1.002
1710000	1580367	2692.79	2233.12	1222.85	8.4944	2.5084	8.3834	7.520	9.833 -13
1715000	1584636	2692.57	2232.90	1222.72	8.3422	2.4634	8.2331	7.377	9.647
1720000	1588904	2692.37	2232.70	1222.61	8.1929	2.4194	8.0857	7.237	9.464
1725000	1593170	2692.20	2232.53	1222.52	8.0464	2.3761	7.9412	7.101	9.285
1730000	1597434	2692.05	2232.38	1222.43	7.9029	2.3337	7.7995	6.967	9.110
1735000	1601696	2691.93	2232.26	1222.37	7.7620	2.2921	7.6605	6.835	8.938
1740000	1605956	2691.83	2232.16	1222.31	7.6239	2.2513	7.5242	6.707	8.770
1745000	1610214	2691.76	2232.09	1222.27	7.4885	2.2113	7.3906	6.581	8.605
1750000	1614470	2691.71	2232.04	1222.25	7.3554 - 9	2.1721 -10	7.2594 -12	6.457 -14	8.443 -13
1755000	1618725	2691.69	2232.02	1222.23	7.2253	2.1336	7.1309	6.336	8.285
1760000	1622977	2691.70	2232.03	1222.24	7.0975	2.0959	7.0047	6.218	8.130
1765000	1627228	2691.72	2232.05	1222.25	6.9722	2.0589	6.8810	6.101	7.978
1770000	1631477	2691.78	2232.11	1222.28	6.8492	2.0226	6.7596	5.987	7.829
1775000	1635724	2691.85	2232.18	1222.32	6.7286	1.9870	6.6406	5.876	7.684
1780000	1639969	2691.95	2232.28	1222.38	6.6103	1.9520	6.5238	5.767	7.541
1785000	1644212	2692.08	2232.41	1222.45	6.4942	1.9177	6.4093	5.659	7.400
1790000	1648453	2692.22	2232.55	1222.53	6.3804	1.8841	6.2969	5.554	7.263
1795000	1652693	2692.39	2232.72	1222.62	6.2687	1.8511	6.1867	5.452	7.129
1800000	1656931	2692.59	2232.92	1222.73	6.1591 - 9	1.8188 -10	6.0785 -12	5.351 -14	6.997 -13
1805000	1661166	2692.81	2233.14	1222.85	6.0516	1.7870	5.9724	5.252	6.868
1810000	1665400	2693.05	2233.38	1222.99	5.9461	1.7559	5.8683	5.155	6.741
1815000	1669632	2693.31	2233.64	1223.13	5.8426	1.7253	5.7662	5.060	6.617
1820000	1673862	2693.60	2233.93	1223.29	5.7411	1.6953	5.6660	4.967	6.495
1825000	1678090	2693.90	2234.23	1223.46	5.6414	1.6659	5.5677	4.876	6.376
1830000	1682317	2694.23	2234.56	1223.65	5.5437	1.6370	5.4712	4.786	6.259
1835000	1686541	2694.59	2234.92	1223.84	5.4477	1.6087	5.3765	4.699	6.144
1840000	1690764	2694.96	2235.29	1224.05	5.3536	1.5809	5.2836	4.613	6.032
1845000	1694985	2695.35	2235.68	1224.27	5.2612	1.5536	5.1924	4.529	5.922
1850000	1699203	2695.77	2236.10	1224.50	5.1706 - 9	1.5269 -10	5.1030 -12	4.446 -14	5.814 -13
1855000	1703421	2696.21	2236.54	1224.74	5.0816	1.5006	5.0152	4.365	5.708
1860000	1707636	2696.66	2236.99	1225.00	4.9944	1.4748	4.9291	4.286	5.604
1865000	1711849	2697.14	2237.47	1225.26	4.9087	1.4495	4.8445	4.208	5.502
1870000	1716061	2697.64	2237.97	1225.54	4.8246	1.4247	4.7615	4.132	5.403
1875000	1720270	2698.15	2238.48	1225.82	4.7421	1.4003	4.6801	4.057	5.305
1880000	1724478	2698.69	2239.02	1226.12	4.6611	1.3764	4.6002	3.983	5.209
1885000	1728684	2699.25	2239.58	1226.43	4.5816	1.3530	4.5217	3.911	5.115
1890000	1732888	2699.82	2240.15	1226.75	4.5036	1.3299	4.4447	3.841	5.023
1895000	1737090	2700.41	2240.74	1227.08	4.4270	1.3073	4.3691	3.772	4.932
1900000	1741290	2701.02	2241.35	1227.42	4.3518 - 9	1.2851 -10	4.2949 -12	3.704 -14	4.843 -13
1905000	1745489	2701.65	2241.98	1227.77	4.2780	1.2633	4.2221	3.638	4.757
1910000	1749686	2702.30	2242.63	1228.13	4.2056	1.2419	4.1506	3.572	4.671
1915000	1753880	2702.96	2243.29	1228.49	4.1345	1.2209	4.0804	3.508	4.588
1920000	1758073	2703.64	2243.97	1228.87	4.0647	1.2003	4.0116	3.446	4.506
1925000	1762265	2704.33	2244.66	1229.26	3.9962	1.1801	3.9439	3.384	4.425
1930000	1766454	2705.05	2245.38	1229.65	3.9289	1.1602	3.8775	3.324	4.346
1935000	1770641	2705.78	2246.11	1230.06	3.8629	1.1407	3.8123	3.265	4.269
1940000	1774827	2706.52	2246.85	1230.47	3.7980	1.1216	3.7483	3.207	4.193
1945000	1779011	2707.28	2247.61	1230.89	3.7344	1.1028	3.6855	3.150	4.119
1950000	1783193	2708.05	2248.38	1231.32	3.6718 - 9	1.0843 -10	3.6238 -12	3.094 -14	4.046 -13
1955000	1787373	2708.84	2249.17	1231.76	3.6105	1.0662	3.5633	3.039	3.974
1960000	1791551	2709.64	2249.97	1232.21	3.5502	1.0484	3.5038	2.985	3.904
1965000	1795728	2710.46	2250.79	1232.66	3.4910	1.0309	3.4454	2.933	3.835
1970000	1799902	2711.00	2251.33	1232.96	3.4329	1.0137	3.3880	2.881	3.768
1975000	1804075	2710.88	2251.21	1232.90	3.3759	9.9689 -11	3.3317	2.832	3.703
1980000	1808246	2710.78	2251.11	1232.84	3.3198	9.8034	3.2764	2.783	3.639
1985000	1812415	2710.69	2251.02	1232.79	3.2647	9.6408	3.2220	2.735	3.576
1990000	1816582	2710.62	2250.95	1232.75	3.2106	9.4810	3.1687	2.688	3.515
1995000	1820748	2710.56	2250.89	1232.72	3.1575	9.3241	3.1162	2.642	3.454
2000000	1824911	2710.51	2250.84	1232.69	3.1053 - 9	9.1699 -11	3.0647 -12	2.596 -14	3.395 -13
2010000	1833233	2710.44	2250.77	1232.65	3.0036	8.8697	2.9643	2.508	3.280
2020000	1841548	2710.42	2250.75	1232.64	2.9055	8.5799	2.8675	2.423	3.168
2030000	1849855	2710.44	2250.77	1232.65	2.8107	8.3001	2.7740	2.341	3.061
2040000	1858155	2710.49	2250.82	1232.68	2.7193	8.0301	2.6837	2.262	2.958
2050000	1866448	2710.58	2250.91	1232.73	2.6310	7.7694	2.5966	2.186	2.858
2060000	1874733	2710.70	2251.03	1232.79	2.5458	7.5176	2.5125	2.112	2.762
2070000	1883011	2710.84	2251.17	1232.87	2.4635	7.2746	2.4312	2.041	2.669
2080000	1891282	2711.01	2251.34	1232.97	2.3840	7.0399	2.3528	1.973	2.580
2090000	1899546	2711.20	2251.53	1233.07	2.3072	6.8133	2.2771	1.907	2.494
2100000	1907803	2711.40	2251.73	1233.18	2.2331 - 9	6.5944 -11	2.2039 -12	1.843 -14	2.410 -13
2110000	1916052	2711.61	2251.94	1233.30	2.1615	6.3830	2.1333	1.782	2.330
2120000	1924294	2711.83	2252.16	1233.42	2.0924	6.1788	2.0650	1.723	2.253
2130000	1932529	2712.06	2252.39	1233.55	2.0256	5.9816	1.9991	1.666	2.178
2140000	1940757	2712.29	2252.62	1233.68	1.9611	5.7910	1.9354	1.611	2.106
2150000	1948978	2712.52	2252.85	1233.80	1.8987	5.6069	1.8739	1.557	2.036
2160000	1957192	2712.74	2253.07	1233.93	1.8385	5.4291	1.8145	1.506	1.969
2170000	1965398	2712.96	2253.29	1234.05	1.7803	5.2572	1.7570	1.457	1.905
2180000	1973597	2713.16	2253.49	1234.16	1.7241	5.0911	1.7015	1.409	1.842
2190000	1981789	2713.35	2253.68	1234.27	1.6697	4.9307	1.6479	1.363	1.782

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Temperature			Pressure			Density	
Z, ft	H, ft	T, °R	t, °F	t, °C	P, mb	P, in. Hg	$\frac{P}{P_0}$	$\rho$ , lb ft <sup>-3</sup>	$\frac{\rho}{\rho_0}$
2200000	1989974	2713.52	2253.85	1234.36	1.6172 - 9	4.7756 -11	1.5960 -12	1.318 -14	1.724 -13
2210000	1998152	2713.67	2254.00	1234.45	1.5664	4.6257	1.5459	1.275	1.667
2220000	2006323	2713.80	2254.13	1234.52	1.5174	4.4808	1.4975	1.234	1.613
2230000	2014487	2713.90	2254.23	1234.57	1.4699	4.3407	1.4507	1.194	1.561
2240000	2022643	2713.97	2254.30	1234.61	1.4241	4.2053	1.4054	1.155	1.510
2250000	2030793	2714.01	2254.34	1234.63	1.3797	4.0744	1.3617	1.118	1.461
2260000	2038936	2714.02	2254.35	1234.64	1.3369	3.9478	1.3194	1.081	1.414
2270000	2047071	2713.99	2254.32	1234.62	1.2954	3.8254	1.2785	1.047	1.369
2280000	2055199	2713.92	2254.25	1234.58	1.2554	3.7071	1.2389	1.013	1.325
2290000	2063321	2713.80	2254.13	1234.52	1.2166	3.5926	1.2007	9.805 -15	1.282
2300000	2071435	2713.65	2253.98	1234.43	1.1791 - 9	3.4819 -11	1.1637 -12	9.491 -15	1.241 -13
2310000	2079543	2713.44	2253.77	1234.32	1.1429	3.3749	1.1279	9.188	1.201
2320000	2087643	2713.20	2253.53	1234.18	1.1078	3.2713	1.0933	8.895	1.163

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Table V

ACCELERATION DUE TO GRAVITY, SPECIFIC WEIGHT, PRESSURE SCALE  
HEIGHT, NUMBER DENSITY, PARTICLE SPEED, COLLISION FREQUENCY,  
MEAN FREE PATH, AND MOLECULAR WEIGHT

English Units

NOTE: A one- or two-digit number (preceded by a plus or minus sign) following the initial entry of each block indicates the power of ten by which that entry and each succeeding entry of that block should be multiplied. A change of power occurring within a block is indicated by a similar notation.

TABLE V  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
-16500	-16487	32.225	3.8934 + 0	30763.	1.1395 +24	1588.8	1.1535 +10	1.3774 - 7	28.964
-16400	-16387	32.225	3.8831	30744.	1.1365	1588.3	1.1501	1.3810	28.964
-16300	-16287	32.224	3.8729	30726.	1.1335	1587.9	1.1467	1.3847	28.964
-16200	-16187	32.224	3.8627	30707.	1.1306	1587.4	1.1434	1.3883	28.964
-16100	-16088	32.224	3.8525	30688.	1.1276	1586.9	1.1400	1.3920	28.964
-16000	-15988	32.223	3.8423 + 0	30669.	1.1246 +24	1586.4	1.1367 +10	1.3956 - 7	28.964
-15900	-15888	32.223	3.8322	30651.	1.1217	1585.9	1.1333	1.3993	28.964
-15800	-15788	32.223	3.8220	30632.	1.1187	1585.4	1.1300	1.4030	28.964
-15700	-15688	32.223	3.8119	30613.	1.1157	1584.9	1.1267	1.4067	28.964
-15600	-15588	32.222	3.8018	30595.	1.1128	1584.4	1.1233	1.4105	28.964
-15500	-15488	32.222	3.7917	30576.	1.1099	1583.9	1.1200	1.4142	28.964
-15400	-15389	32.222	3.7817	30557.	1.1069	1583.4	1.1167	1.4179	28.964
-15300	-15289	32.221	3.7716	30538.	1.1040	1582.9	1.1134	1.4217	28.964
-15200	-15189	32.221	3.7616	30520.	1.1011	1582.4	1.1101	1.4255	28.964
-15100	-15089	32.221	3.7516	30501.	1.0982	1582.0	1.1068	1.4293	28.964
-15000	-14989	32.220	3.7417 + 0	30482.	1.0953 +24	1581.5	1.1036 +10	1.4330 - 7	28.964
-14900	-14889	32.220	3.7317	30464.	1.0924	1581.0	1.1003	1.4369	28.964
-14800	-14790	32.220	3.7218	30445.	1.0895	1580.5	1.0970	1.4407	28.964
-14700	-14690	32.219	3.7119	30426.	1.0866	1580.0	1.0938	1.4445	28.964
-14600	-14590	32.219	3.7020	30408.	1.0837	1579.5	1.0905	1.4484	28.964
-14500	-14490	32.219	3.6921	30389.	1.0808	1579.0	1.0873	1.4522	28.964
-14400	-14390	32.218	3.6823	30370.	1.0779	1578.5	1.0841	1.4561	28.964
-14300	-14290	32.218	3.6724	30351.	1.0751	1578.0	1.0809	1.4600	28.964
-14200	-14190	32.218	3.6626	30333.	1.0722	1577.5	1.0776	1.4639	28.964
-14100	-14090	32.218	3.6528	30314.	1.0694	1577.0	1.0744	1.4678	28.964
-14000	-13991	32.217	3.6431 + 0	30295.	1.0665 +24	1576.5	1.0712 +10	1.4717 - 7	28.964
-13900	-13891	32.217	3.6333	30277.	1.0637	1576.0	1.0680	1.4756	28.964
-13800	-13791	32.217	3.6236	30258.	1.0608	1575.5	1.0649	1.4796	28.964
-13700	-13691	32.216	3.6139	30239.	1.0580	1575.0	1.0617	1.4835	28.964
-13600	-13591	32.216	3.6042	30220.	1.0552	1574.5	1.0585	1.4875	28.964
-13500	-13491	32.216	3.5945	30202.	1.0523	1574.1	1.0554	1.4915	28.964
-13400	-13391	32.215	3.5849	30183.	1.0495	1573.6	1.0522	1.4955	28.964
-13300	-13292	32.215	3.5753	30164.	1.0467	1573.1	1.0491	1.4995	28.964
-13200	-13192	32.215	3.5656	30146.	1.0439	1572.6	1.0459	1.5035	28.964
-13100	-13092	32.214	3.5561	30127.	1.0411	1572.1	1.0428	1.5076	28.964
-13000	-12992	32.214	3.5465 + 0	30108.	1.0383 +24	1571.6	1.0397 +10	1.5116 - 7	28.964
-12900	-12892	32.214	3.5369	30089.	1.0355	1571.1	1.0365	1.5157	28.964
-12800	-12792	32.214	3.5274	30071.	1.0328	1570.6	1.0334	1.5198	28.964
-12700	-12692	32.213	3.5179	30052.	1.0300	1570.1	1.0303	1.5239	28.964
-12600	-12592	32.213	3.5084	30033.	1.0272	1569.6	1.0272	1.5280	28.964
-12500	-12493	32.213	3.4989	30015.	1.0245	1569.1	1.0241	1.5321	28.964
-12400	-12393	32.212	3.4895	29996.	1.0217	1568.6	1.0211	1.5362	28.964
-12300	-12293	32.212	3.4800	29977.	1.0189	1568.1	1.0180	1.5404	28.964
-12200	-12193	32.212	3.4706	29958.	1.0162	1567.6	1.0149	1.5445	28.964
-12100	-12093	32.211	3.4612	29940.	1.0135	1567.1	1.0119	1.5487	28.964
-12000	-11993	32.211	3.4519 + 0	29921.	1.0107 +24	1566.6	1.0088 +10	1.5529 - 7	28.964
-11900	-11893	32.211	3.4425	29902.	1.0080	1566.1	1.0058	1.5571	28.964
-11800	-11793	32.210	3.4332	29884.	1.0053	1565.6	1.0027	1.5613	28.964
-11700	-11693	32.210	3.4239	29865.	1.0026	1565.1	9.9971 + 9	1.5656	28.964
-11600	-11594	32.210	3.4146	29846.	9.9984 +23	1564.6	9.9669	1.5698	28.964
-11500	-11494	32.210	3.4053	29827.	9.9713	1564.1	9.9367	1.5741	28.964
-11400	-11394	32.209	3.3960	29809.	9.9443	1563.6	9.9066	1.5784	28.964
-11300	-11294	32.209	3.3868	29790.	9.9173	1563.1	9.8766	1.5826	28.964
-11200	-11194	32.209	3.3776	29771.	9.8904	1562.6	9.8467	1.5870	28.964
-11100	-11094	32.208	3.3684	29753.	9.8636	1562.1	9.8168	1.5913	28.964
-11000	-10994	32.208	3.3592 + 0	29734.	9.8368 +23	1561.6	9.7871 + 9	1.5956 - 7	28.964
-10900	-10894	32.208	3.3500	29715.	9.8101	1561.1	9.7573	1.6000	28.964
-10800	-10794	32.207	3.3409	29696.	9.7834	1560.6	9.7277	1.6043	28.964
-10700	-10695	32.207	3.3318	29678.	9.7568	1560.1	9.6981	1.6087	28.964
-10600	-10595	32.207	3.3227	29659.	9.7302	1559.6	9.6686	1.6131	28.964
-10500	-10495	32.206	3.3136	29640.	9.7037	1559.1	9.6392	1.6175	28.964
-10400	-10395	32.206	3.3045	29621.	9.6772	1558.6	9.6098	1.6219	28.964
-10300	-10295	32.206	3.2955	29603.	9.6509	1558.1	9.5805	1.6263	28.964
-10200	-10195	32.206	3.2864	29584.	9.6245	1557.6	9.5513	1.6308	28.964
-10100	-10095	32.205	3.2774	29565.	9.5982	1557.1	9.5222	1.6353	28.964
-10000	-9995	32.205	3.2684 + 0	29547.	9.5720 +23	1556.6	9.4931 + 9	1.6397 - 7	28.964
-9900	-9895	32.205	3.2595	29528.	9.5458	1556.1	9.4641	1.6442	28.964
-9800	-9795	32.204	3.2505	29509.	9.5197	1555.6	9.4351	1.6488	28.964
-9700	-9695	32.204	3.2416	29490.	9.4936	1555.1	9.4063	1.6533	28.964
-9600	-9596	32.204	3.2327	29472.	9.4676	1554.6	9.3775	1.6578	28.964
-9500	-9496	32.203	3.2238	29453.	9.4416	1554.1	9.3487	1.6624	28.964
-9400	-9396	32.203	3.2149	29434.	9.4157	1553.6	9.3201	1.6670	28.964
-9300	-9296	32.203	3.2060	29415.	9.3899	1553.1	9.2915	1.6716	28.964
-9200	-9196	32.202	3.1972	29397.	9.3641	1552.6	9.2630	1.6762	28.964
-9100	-9096	32.202	3.1884	29378.	9.3383	1552.1	9.2345	1.6808	28.964

TABLE V

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g, \text{ft sec}^{-2}$	Specific weight $\omega, \text{lb ft}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{ft}$	Number density $n, \text{ft}^{-3}$	Particle speed $V, \text{ft sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{ft}$	Molecular weight $M$
Z, ft	H, ft								
-16500	-16513	32.225	3.8947 + 0	30765.	1.1399 +24	1588.9	1.1539 +10	1.3769 - 7	28.964
-16400	-16413	32.225	3.8845	30747.	1.1369	1588.4	1.1506	1.3806	28.964
-16300	-16313	32.224	3.8742	30728.	1.1339	1587.9	1.1472	1.3842	28.964
-16200	-16213	32.224	3.8640	30709.	1.1309	1587.4	1.1438	1.3879	28.964
-16100	-16112	32.224	3.8538	30690.	1.1280	1586.9	1.1404	1.3915	28.964
-16000	-16012	32.223	3.8436 + 0	30672.	1.1250 +24	1586.4	1.1371 +10	1.3952 - 7	28.964
-15900	-15912	32.223	3.8334	30653.	1.1220	1586.0	1.1337	1.3989	28.964
-15800	-15812	32.223	3.8232	30634.	1.1190	1585.5	1.1304	1.4026	28.964
-15700	-15712	32.223	3.8131	30615.	1.1161	1585.0	1.1270	1.4063	28.964
-15600	-15612	32.222	3.8030	30597.	1.1131	1584.5	1.1237	1.4100	28.964
-15500	-15512	32.222	3.7929	30578.	1.1102	1584.0	1.1204	1.4138	28.964
-15400	-15411	32.222	3.7828	30559.	1.1073	1583.5	1.1171	1.4175	28.964
-15300	-15311	32.221	3.7728	30541.	1.1043	1583.0	1.1138	1.4213	28.964
-15200	-15211	32.221	3.7627	30522.	1.1014	1582.5	1.1105	1.4251	28.964
-15100	-15111	32.221	3.7527	30503.	1.0985	1582.0	1.1072	1.4288	28.964
-15000	-15011	32.220	3.7428 + 0	30484.	1.0956 +24	1581.5	1.1039 +10	1.4326 - 7	28.964
-14900	-14911	32.220	3.7328	30466.	1.0927	1581.0	1.1006	1.4364	28.964
-14800	-14811	32.220	3.7228	30447.	1.0898	1580.5	1.0974	1.4403	28.964
-14700	-14710	32.219	3.7129	30428.	1.0869	1580.0	1.0941	1.4441	28.964
-14600	-14610	32.219	3.7030	30409.	1.0840	1579.5	1.0909	1.4480	28.964
-14500	-14510	32.219	3.6931	30391.	1.0811	1579.0	1.0876	1.4518	28.964
-14400	-14410	32.219	3.6833	30372.	1.0782	1578.6	1.0844	1.4557	28.964
-14300	-14310	32.218	3.6734	30353.	1.0754	1578.1	1.0812	1.4596	28.964
-14200	-14210	32.218	3.6636	30334.	1.0725	1577.6	1.0780	1.4635	28.964
-14100	-14110	32.218	3.6538	30316.	1.0696	1577.1	1.0747	1.4674	28.964
-14000	-14009	32.217	3.6440 + 0	30297.	1.0668 +24	1576.6	1.0715 +10	1.4713 - 7	28.964
-13900	-13909	32.217	3.6342	30278.	1.0639	1576.1	1.0683	1.4753	28.964
-13800	-13809	32.217	3.6245	30260.	1.0611	1575.6	1.0652	1.4792	28.964
-13700	-13709	32.216	3.6148	30241.	1.0582	1575.1	1.0620	1.4832	28.964
-13600	-13609	32.216	3.6051	30222.	1.0554	1574.6	1.0588	1.4872	28.964
-13500	-13509	32.216	3.5954	30203.	1.0526	1574.1	1.0556	1.4911	28.964
-13400	-13409	32.215	3.5857	30185.	1.0498	1573.6	1.0525	1.4952	28.964
-13300	-13308	32.215	3.5761	30166.	1.0470	1573.1	1.0493	1.4992	28.964
-13200	-13208	32.215	3.5664	30147.	1.0442	1572.6	1.0462	1.5032	28.964
-13100	-13108	32.215	3.5568	30128.	1.0413	1572.1	1.0430	1.5072	28.964
-13000	-13008	32.214	3.5473 + 0	30110.	1.0386 +24	1571.6	1.0399 +10	1.5113 - 7	28.964
-12900	-12908	32.214	3.5377	30091.	1.0358	1571.1	1.0368	1.5154	28.964
-12800	-12808	32.214	3.5282	30072.	1.0330	1570.6	1.0337	1.5195	28.964
-12700	-12708	32.213	3.5186	30053.	1.0302	1570.1	1.0306	1.5236	28.964
-12600	-12608	32.213	3.5091	30035.	1.0274	1569.6	1.0275	1.5277	28.964
-12500	-12507	32.213	3.4996	30016.	1.0247	1569.1	1.0244	1.5318	28.964
-12400	-12407	32.212	3.4902	29997.	1.0219	1568.6	1.0213	1.5359	28.964
-12300	-12307	32.212	3.4807	29978.	1.0191	1568.1	1.0182	1.5401	28.964
-12200	-12207	32.212	3.4713	29960.	1.0164	1567.6	1.0151	1.5443	28.964
-12100	-12107	32.211	3.4619	29941.	1.0136	1567.1	1.0121	1.5484	28.964
-12000	-12007	32.211	3.4525 + 0	29922.	1.0109 +24	1566.6	1.0090 +10	1.5526 - 7	28.964
-11900	-11907	32.211	3.4431	29904.	1.0082	1566.1	1.0060	1.5568	28.964
-11800	-11807	32.210	3.4338	29885.	1.0055	1565.6	1.0029	1.5611	28.964
-11700	-11707	32.210	3.4245	29866.	1.0027	1565.1	9.9991 + 9	1.5653	28.964
-11600	-11606	32.210	3.4152	29847.	1.0000	1564.6	9.9688	1.5695	28.964
-11500	-11506	32.210	3.4059	29829.	9.9730 +23	1564.2	9.9386	1.5738	28.964
-11400	-11406	32.209	3.3966	29810.	9.9440	1563.7	9.9085	1.5781	28.964
-11300	-11306	32.209	3.3874	29791.	9.9190	1563.2	9.8785	1.5824	28.964
-11200	-11206	32.209	3.3781	29772.	9.8921	1562.7	9.8485	1.5867	28.964
-11100	-11106	32.208	3.3689	29754.	9.8652	1562.2	9.8186	1.5910	28.964
-11000	-11006	32.208	3.3597 + 0	29735.	9.8384 +23	1561.7	9.7888 + 9	1.5954 - 7	28.964
-10900	-10906	32.208	3.3504	29716.	9.8116	1561.2	9.7590	1.5997	28.964
-10800	-10806	32.207	3.3414	29697.	9.7849	1560.7	9.7293	1.6041	28.964
-10700	-10705	32.207	3.3323	29679.	9.7582	1560.2	9.6997	1.6085	28.964
-10600	-10605	32.207	3.3232	29660.	9.7316	1559.7	9.6702	1.6128	28.964
-10500	-10505	32.206	3.3141	29641.	9.7051	1559.2	9.6407	1.6173	28.964
-10400	-10405	32.206	3.3050	29622.	9.6786	1558.7	9.6113	1.6217	28.964
-10300	-10305	32.206	3.2959	29604.	9.6522	1558.2	9.5820	1.6261	28.964
-10200	-10205	32.206	3.2869	29585.	9.6258	1557.7	9.5528	1.6306	28.964
-10100	-10105	32.205	3.2779	29566.	9.5995	1557.2	9.5236	1.6350	28.964
-10000	-10005	32.205	3.2689 + 0	29547.	9.5732 +23	1556.7	9.4945 + 9	1.6395 - 7	28.964
-9900	-9905	32.205	3.2599	29529.	9.5470	1556.1	9.4654	1.6440	28.964
-9800	-9805	32.204	3.2509	29510.	9.5209	1555.6	9.4365	1.6486	28.964
-9700	-9705	32.204	3.2420	29491.	9.4948	1555.1	9.4076	1.6531	28.964
-9600	-9604	32.204	3.2331	29472.	9.4687	1554.6	9.3787	1.6576	28.964
-9500	-9504	32.203	3.2242	29454.	9.4428	1554.1	9.3500	1.6622	28.964
-9400	-9404	32.203	3.2153	29435.	9.4168	1553.6	9.3213	1.6668	28.964
-9300	-9304	32.203	3.2064	29416.	9.3909	1553.1	9.2927	1.6714	28.964
-9200	-9204	32.202	3.1976	29398.	9.3651	1552.6	9.2641	1.6760	28.964
-9100	-9104	32.202	3.1887	29379.	9.3394	1552.1	9.2356	1.6806	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
-9000	-8996	32.202	3.1796 + 0	29359.	9.3126 +23	1551.6	9.2061 + 9	1.6854 - 7	28.964
-8900	-8896	32.202	3.1708	29341.	9.2870	1551.1	9.1778	1.6901	28.964
-8800	-8796	32.201	3.1620	29322.	9.2614	1550.6	9.1496	1.6947	28.964
-8700	-8696	32.201	3.1533	29303.	9.2359	1550.1	9.1214	1.6994	28.964
-8600	-8596	32.201	3.1446	29284.	9.2104	1549.6	9.0933	1.7041	28.964
-8500	-8497	32.200	3.1359	29266.	9.1850	1549.1	9.0652	1.7088	28.964
-8400	-8397	32.200	3.1272	29247.	9.1596	1548.6	9.0373	1.7136	28.964
-8300	-8297	32.200	3.1185	29228.	9.1343	1548.1	9.0094	1.7183	28.964
-8200	-8197	32.199	3.1098	29209.	9.1091	1547.6	8.9815	1.7231	28.964
-8100	-8097	32.199	3.1012	29191.	9.0839	1547.1	8.9538	1.7279	28.964
-8000	-7997	32.199	3.0926 + 0	29172.	9.0587 +23	1546.6	8.9261 + 9	1.7327 - 7	28.964
-7900	-7897	32.198	3.0840	29153.	9.0336	1546.1	8.8984	1.7375	28.964
-7800	-7797	32.198	3.0754	29135.	9.0086	1545.6	8.8709	1.7423	28.964
-7700	-7697	32.198	3.0668	29116.	8.9836	1545.1	8.8434	1.7472	28.964
-7600	-7597	32.198	3.0583	29097.	8.9586	1544.6	8.8159	1.7520	28.964
-7500	-7497	32.197	3.0498	29078.	8.9337	1544.1	8.7886	1.7569	28.964
-7400	-7397	32.197	3.0413	29060.	8.9089	1543.6	8.7613	1.7618	28.964
-7300	-7297	32.197	3.0328	29041.	8.8841	1543.0	8.7340	1.7667	28.964
-7200	-7198	32.196	3.0243	29022.	8.8594	1542.5	8.7069	1.7716	28.964
-7100	-7098	32.196	3.0159	29003.	8.8347	1542.0	8.6798	1.7766	28.964
-7000	-6998	32.196	3.0074 + 0	28985.	8.8101 +23	1541.5	8.6528 + 9	1.7816 - 7	28.964
-6900	-6898	32.195	2.9990	28966.	8.7855	1541.0	8.6258	1.7865	28.964
-6800	-6798	32.195	2.9906	28947.	8.7610	1540.5	8.5989	1.7915	28.964
-6700	-6698	32.195	2.9822	28928.	8.7366	1540.0	8.5721	1.7965	28.964
-6600	-6598	32.194	2.9739	28910.	8.7121	1539.5	8.5453	1.8016	28.964
-6500	-6498	32.194	2.9655	28891.	8.6878	1539.0	8.5186	1.8066	28.964
-6400	-6398	32.194	2.9572	28872.	8.6635	1538.5	8.4920	1.8117	28.964
-6300	-6298	32.193	2.9489	28853.	8.6392	1538.0	8.4654	1.8168	28.964
-6200	-6198	32.193	2.9406	28835.	8.6150	1537.5	8.4389	1.8219	28.964
-6100	-6098	32.193	2.9323	28816.	8.5909	1537.0	8.4125	1.8270	28.964
-6000	-5998	32.193	2.9241 + 0	28797.	8.5668 +23	1536.5	8.3861 + 9	1.8322 - 7	28.964
-5900	-5898	32.192	2.9158	28779.	8.5427	1536.0	8.3598	1.8373	28.964
-5800	-5798	32.192	2.9076	28760.	8.5187	1535.5	8.3336	1.8425	28.964
-5700	-5698	32.192	2.8994	28741.	8.4948	1534.9	8.3074	1.8477	28.964
-5600	-5598	32.191	2.8912	28722.	8.4709	1534.4	8.2813	1.8529	28.964
-5500	-5499	32.191	2.8831	28704.	8.4470	1533.9	8.2553	1.8581	28.964
-5400	-5399	32.191	2.8749	28685.	8.4232	1533.4	8.2293	1.8634	28.964
-5300	-5299	32.190	2.8668	28666.	8.3995	1532.9	8.2034	1.8686	28.964
-5200	-5199	32.190	2.8587	28647.	8.3758	1532.4	8.1775	1.8739	28.964
-5100	-5099	32.190	2.8506	28629.	8.3522	1531.9	8.1517	1.8792	28.964
-5000	-4999	32.189	2.8425 + 0	28610.	8.3286 +23	1531.4	8.1260 + 9	1.8846 - 7	28.964
-4900	-4899	32.189	2.8345	28591.	8.3051	1530.9	8.1003	1.8899	28.964
-4800	-4799	32.189	2.8264	28572.	8.2816	1530.4	8.0748	1.8953	28.964
-4700	-4699	32.189	2.8184	28554.	8.2581	1529.9	8.0492	1.9006	28.964
-4600	-4599	32.188	2.8104	28535.	8.2348	1529.3	8.0238	1.9060	28.964
-4500	-4499	32.188	2.8024	28516.	8.2114	1528.8	7.9984	1.9114	28.964
-4400	-4399	32.188	2.7944	28497.	8.1881	1528.3	7.9730	1.9169	28.964
-4300	-4299	32.187	2.7865	28479.	8.1649	1527.8	7.9477	1.9223	28.964
-4200	-4199	32.187	2.7785	28460.	8.1417	1527.3	7.9225	1.9278	28.964
-4100	-4099	32.187	2.7706	28441.	8.1186	1526.8	7.8974	1.9333	28.964
-4000	-3999	32.186	2.7627 + 0	28422.	8.0955 +23	1526.3	7.8723 + 9	1.9388 - 7	28.964
-3900	-3899	32.186	2.7548	28404.	8.0725	1525.8	7.8473	1.9443	28.964
-3800	-3799	32.186	2.7469	28385.	8.0495	1525.3	7.8223	1.9499	28.964
-3700	-3699	32.185	2.7391	28366.	8.0266	1524.8	7.7974	1.9555	28.964
-3600	-3599	32.185	2.7313	28347.	8.0037	1524.2	7.7726	1.9610	28.964
-3500	-3499	32.185	2.7234	28329.	7.9809	1523.7	7.7478	1.9667	28.964
-3400	-3399	32.185	2.7156	28310.	7.9581	1523.2	7.7231	1.9723	28.964
-3300	-3299	32.184	2.7079	28291.	7.9354	1522.7	7.6985	1.9779	28.964
-3200	-3200	32.184	2.7001	28272.	7.9127	1522.2	7.6739	1.9836	28.964
-3100	-3100	32.184	2.6924	28254.	7.8900	1521.7	7.6494	1.9893	28.964
-3000	-3000	32.183	2.6846 + 0	28235.	7.8675 +23	1521.2	7.6249 + 9	1.9950 - 7	28.964
-2900	-2900	32.183	2.6769	28216.	7.8449	1520.7	7.6005	2.0007	28.964
-2800	-2800	32.183	2.6692	28197.	7.8225	1520.1	7.5762	2.0065	28.964
-2700	-2700	32.182	2.6615	28179.	7.8000	1519.6	7.5519	2.0123	28.964
-2600	-2600	32.182	2.6539	28160.	7.7776	1519.1	7.5277	2.0180	28.964
-2500	-2500	32.182	2.6462	28141.	7.7553	1518.6	7.5035	2.0239	28.964
-2400	-2400	32.181	2.6386	28122.	7.7330	1518.1	7.4794	2.0297	28.964
-2300	-2300	32.181	2.6310	28104.	7.7108	1517.6	7.4554	2.0355	28.964
-2200	-2200	32.181	2.6234	28085.	7.6886	1517.1	7.4314	2.0414	28.964
-2100	-2100	32.181	2.6158	28066.	7.6665	1516.6	7.4075	2.0473	28.964
-2000	-2000	32.180	2.6082 + 0	28047.	7.6444 +23	1516.0	7.3837 + 9	2.0532 - 7	28.964
-1900	-1900	32.180	2.6007	28029.	7.6223	1515.5	7.3599	2.0592	28.964
-1800	-1800	32.180	2.5932	28010.	7.6003	1515.0	7.3362	2.0651	28.964
-1700	-1700	32.179	2.5857	27991.	7.5784	1514.5	7.3125	2.0711	28.964
-1600	-1600	32.179	2.5782	27972.	7.5565	1514.0	7.2889	2.0771	28.964
-1500	-1500	32.179	2.5707	27954.	7.5346	1513.5	7.2654	2.0831	28.964
-1400	-1400	32.178	2.5632	27935.	7.5128	1513.0	7.2419	2.0892	28.964
-1300	-1300	32.178	2.5558	27916.	7.4911	1512.4	7.2184	2.0952	28.964
-1200	-1200	32.178	2.5483	27897.	7.4694	1511.9	7.1951	2.1013	28.964
-1100	-1100	32.177	2.5409	27879.	7.4477	1511.4	7.1718	2.1074	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{v}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
-9000	-9004	32.202	3.1799 + 0	29360.	9.3136 +23	1551.6	9.2072 + 9	1.6852 - 7	28.964
-8900	-8904	32.202	3.1711	29341.	9.2880	1551.1	9.1789	1.6899	28.964
-8800	-8804	32.201	3.1624	29323.	9.2624	1550.6	9.1506	1.6946	28.964
-8700	-8704	32.201	3.1536	29304.	9.2368	1550.1	9.1224	1.6992	28.964
-8600	-8604	32.201	3.1449	29285.	9.2113	1549.6	9.0943	1.7040	28.964
-8500	-8503	32.200	3.1362	29266.	9.1859	1549.1	9.0662	1.7087	28.964
-8400	-8403	32.200	3.1275	29248.	9.1605	1548.6	9.0382	1.7134	28.964
-8300	-8303	32.200	3.1188	29229.	9.1352	1548.1	9.0103	1.7182	28.964
-8200	-8203	32.199	3.1101	29210.	9.1099	1547.6	8.9824	1.7229	28.964
-8100	-8103	32.199	3.1015	29191.	9.0847	1547.1	8.9546	1.7277	28.964
-8000	-8003	32.199	3.0929 + 0	29173.	9.0595 +23	1546.6	8.9269 + 9	1.7325 - 7	28.964
-7900	-7903	32.198	3.0842	29154.	9.0344	1546.1	8.8992	1.7373	28.964
-7800	-7803	32.198	3.0757	29135.	9.0093	1545.6	8.8717	1.7422	28.964
-7700	-7703	32.198	3.0671	29116.	8.9843	1545.1	8.8441	1.7470	28.964
-7600	-7603	32.198	3.0585	29098.	8.9593	1544.6	8.8167	1.7519	28.964
-7500	-7503	32.197	3.0500	29079.	8.9344	1544.1	8.7893	1.7568	28.964
-7400	-7403	32.197	3.0415	29060.	8.9096	1543.6	8.7620	1.7617	28.964
-7300	-7303	32.197	3.0330	29041.	8.8848	1543.1	8.7347	1.7666	28.964
-7200	-7202	32.196	3.0245	29023.	8.8600	1542.6	8.7076	1.7715	28.964
-7100	-7102	32.196	3.0161	29004.	8.8353	1542.1	8.6804	1.7765	28.964
-7000	-7002	32.196	3.0076 + 0	28985.	8.8107 +23	1541.5	8.6534 + 9	1.7814 - 7	28.964
-6900	-6902	32.195	2.9992	28966.	8.7861	1541.0	8.6264	1.7864	28.964
-6800	-6802	32.195	2.9908	28948.	8.7616	1540.5	8.5995	1.7914	28.964
-6700	-6702	32.195	2.9824	28929.	8.7371	1540.0	8.5726	1.7964	28.964
-6600	-6602	32.194	2.9740	28910.	8.7127	1539.5	8.5459	1.8015	28.964
-6500	-6502	32.194	2.9657	28891.	8.6883	1539.0	8.5192	1.8065	28.964
-6400	-6402	32.194	2.9574	28873.	8.6640	1538.5	8.4925	1.8116	28.964
-6300	-6302	32.193	2.9491	28854.	8.6397	1538.0	8.4659	1.8167	28.964
-6200	-6202	32.193	2.9408	28835.	8.6155	1537.5	8.4394	1.8218	28.964
-6100	-6102	32.193	2.9325	28816.	8.5913	1537.0	8.4130	1.8269	28.964
-6000	-6002	32.193	2.9242 + 0	28798.	8.5672 +23	1536.5	8.3866 + 9	1.8321 - 7	28.964
-5900	-5902	32.192	2.9160	28779.	8.5431	1536.0	8.3603	1.8372	28.964
-5800	-5802	32.192	2.9078	28760.	8.5191	1535.5	8.3340	1.8424	28.964
-5700	-5702	32.192	2.8996	28741.	8.4951	1535.0	8.3078	1.8476	28.964
-5600	-5602	32.191	2.8914	28723.	8.4712	1534.4	8.2817	1.8528	28.964
-5500	-5501	32.191	2.8832	28704.	8.4474	1533.9	8.2556	1.8580	28.964
-5400	-5401	32.191	2.8750	28685.	8.4236	1533.4	8.2296	1.8633	28.964
-5300	-5301	32.190	2.8669	28666.	8.3998	1532.9	8.2037	1.8686	28.964
-5200	-5201	32.190	2.8588	28648.	8.3761	1532.4	8.1778	1.8739	28.964
-5100	-5101	32.190	2.8507	28629.	8.3525	1531.9	8.1520	1.8792	28.964
-5000	-5001	32.189	2.8426 + 0	28610.	8.3289 +23	1531.4	8.1263 + 9	1.8845 - 7	28.964
-4900	-4901	32.189	2.8345	28591.	8.3053	1530.9	8.1006	1.8898	28.964
-4800	-4801	32.189	2.8265	28573.	8.2818	1530.4	8.0750	1.8952	28.964
-4700	-4701	32.189	2.8185	28554.	8.2584	1529.9	8.0495	1.9006	28.964
-4600	-4601	32.188	2.8105	28535.	8.2350	1529.4	8.0240	1.9060	28.964
-4500	-4501	32.188	2.8025	28516.	8.2116	1528.8	7.9986	1.9114	28.964
-4400	-4401	32.188	2.7945	28498.	8.1884	1528.3	7.9733	1.9168	28.964
-4300	-4301	32.187	2.7865	28479.	8.1651	1527.8	7.9480	1.9223	28.964
-4200	-4201	32.187	2.7786	28460.	8.1419	1527.3	7.9228	1.9278	28.964
-4100	-4101	32.187	2.7707	28441.	8.1188	1526.8	7.8976	1.9333	28.964
-4000	-4001	32.186	2.7628 + 0	28423.	8.0957 +23	1526.3	7.8725 + 9	1.9388 - 7	28.964
-3900	-3901	32.186	2.7549	28404.	8.0727	1525.8	7.8475	1.9443	28.964
-3800	-3801	32.186	2.7470	28385.	8.0497	1525.3	7.8225	1.9499	28.964
-3700	-3701	32.185	2.7391	28366.	8.0267	1524.8	7.7976	1.9554	28.964
-3600	-3601	32.185	2.7313	28348.	8.0038	1524.2	7.7728	1.9610	28.964
-3500	-3501	32.185	2.7235	28329.	7.9810	1523.7	7.7480	1.9666	28.964
-3400	-3401	32.185	2.7157	28310.	7.9582	1523.2	7.7233	1.9723	28.964
-3300	-3301	32.184	2.7079	28291.	7.9355	1522.7	7.6986	1.9779	28.964
-3200	-3200	32.184	2.7001	28273.	7.9128	1522.2	7.6740	1.9836	28.964
-3100	-3100	32.184	2.6924	28254.	7.8902	1521.7	7.6495	1.9893	28.964
-3000	-3000	32.183	2.6847 + 0	28235.	7.8676 +23	1521.2	7.6250 + 9	1.9950 - 7	28.964
-2900	-2900	32.183	2.6769	28216.	7.8450	1520.7	7.6006	2.0007	28.964
-2800	-2800	32.183	2.6692	28197.	7.8225	1520.2	7.5763	2.0065	28.964
-2700	-2700	32.182	2.6616	28179.	7.8001	1519.6	7.5520	2.0122	28.964
-2600	-2600	32.182	2.6539	28160.	7.7777	1519.1	7.5278	2.0180	28.964
-2500	-2500	32.182	2.6462	28141.	7.7554	1518.6	7.5036	2.0238	28.964
-2400	-2400	32.181	2.6386	28122.	7.7331	1518.1	7.4795	2.0297	28.964
-2300	-2300	32.181	2.6310	28104.	7.7108	1517.6	7.4555	2.0355	28.964
-2200	-2200	32.181	2.6234	28085.	7.6886	1517.1	7.4315	2.0414	28.964
-2100	-2100	32.181	2.6158	28066.	7.6665	1516.6	7.4076	2.0473	28.964
-2000	-2000	32.180	2.6083 + 0	28047.	7.6444 +23	1516.0	7.3837 + 9	2.0532 - 7	28.964
-1900	-1900	32.180	2.6007	28029.	7.6224	1515.5	7.3599	2.0592	28.964
-1800	-1800	32.180	2.5932	28010.	7.6004	1515.0	7.3362	2.0651	28.964
-1700	-1700	32.179	2.5857	27991.	7.5784	1514.5	7.3125	2.0711	28.964
-1600	-1600	32.179	2.5782	27972.	7.5565	1514.0	7.2889	2.0771	28.964
-1500	-1500	32.179	2.5707	27954.	7.5347	1513.5	7.2654	2.0831	28.964
-1400	-1400	32.178	2.5632	27935.	7.5129	1513.0	7.2419	2.0892	28.964
-1300	-1300	32.178	2.5558	27916.	7.4911	1512.4	7.2185	2.0952	28.964
-1200	-1200	32.178	2.5484	27897.	7.4694	1511.9	7.1951	2.1013	28.964
-1100	-1100	32.177	2.5409	27879.	7.4478	1511.4	7.1718	2.1074	28.964



TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $V$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
-1000	-1000	32.177	2.5335 + 0	27860.	7.4261 +23	1510.9	7.1485 + 9	2.1136 - 7	28.964
-900	-900	32.177	2.5262	27841.	7.4046	1510.4	7.1253	2.1197	28.964
-800	-800	32.177	2.5188	27822.	7.3831	1509.9	7.1022	2.1259	28.964
-700	-700	32.176	2.5114	27804.	7.3616	1509.3	7.0792	2.1321	28.964
-600	-600	32.176	2.5041	27785.	7.3402	1508.8	7.0561	2.1383	28.964
-500	-500	32.176	2.4968	27766.	7.3188	1508.3	7.0332	2.1446	28.964
-400	-400	32.175	2.4895	27747.	7.2975	1507.8	7.0103	2.1508	28.964
-300	-300	32.175	2.4822	27729.	7.2762	1507.3	6.9875	2.1571	28.964
-200	-200	32.175	2.4750	27710.	7.2550	1506.8	6.9647	2.1634	28.964
-100	-100	32.174	2.4677	27691.	7.2338	1506.2	6.9420	2.1698	28.964
0	0	32.174	2.4605 + 0	27672.	7.2127 +23	1505.7	6.9193 + 9	2.1761 - 7	28.964
100	100	32.174	2.4533	27654.	7.1916	1505.2	6.8967	2.1825	28.964
200	200	32.173	2.4461	27635.	7.1706	1504.7	6.8742	2.1889	28.964
300	300	32.173	2.4389	27616.	7.1496	1504.2	6.8517	2.1953	28.964
400	400	32.173	2.4317	27597.	7.1287	1503.7	6.8293	2.2018	28.964
500	500	32.173	2.4246	27578.	7.1078	1503.1	6.8069	2.2082	28.964
600	600	32.172	2.4174	27560.	7.0869	1502.6	6.7846	2.2147	28.964
700	700	32.172	2.4103	27541.	7.0661	1502.1	6.7624	2.2213	28.964
800	800	32.172	2.4032	27522.	7.0454	1501.6	6.7402	2.2278	28.964
900	900	32.171	2.3961	27503.	7.0247	1501.1	6.7181	2.2344	28.964
1000	1000	32.171	2.3891 + 0	27485.	7.0040 +23	1500.5	6.6960 + 9	2.2410 - 7	28.964
1100	1100	32.171	2.3820	27466.	6.9834	1500.0	6.6740	2.2476	28.964
1200	1200	32.170	2.3750	27447.	6.9628	1499.5	6.6520	2.2542	28.964
1300	1300	32.170	2.3679	27428.	6.9423	1499.0	6.6301	2.2609	28.964
1400	1400	32.170	2.3609	27410.	6.9218	1498.5	6.6082	2.2676	28.964
1500	1500	32.169	2.3539	27391.	6.9014	1497.9	6.5865	2.2743	28.964
1600	1600	32.169	2.3470	27372.	6.8810	1497.4	6.5647	2.2810	28.964
1700	1700	32.169	2.3400	27353.	6.8607	1496.9	6.5430	2.2878	28.964
1800	1800	32.168	2.3331	27335.	6.8404	1496.4	6.5214	2.2946	28.964
1900	1900	32.168	2.3261	27316.	6.8201	1495.9	6.4999	2.3014	28.964
2000	2000	32.168	2.3192 + 0	27297.	6.7999 +23	1495.3	6.4784 + 9	2.3082 - 7	28.964
2100	2100	32.168	2.3123	27278.	6.7798	1494.8	6.4569	2.3151	28.964
2200	2200	32.167	2.3055	27259.	6.7597	1494.3	6.4355	2.3219	28.964
2300	2300	32.167	2.2986	27241.	6.7396	1493.8	6.4142	2.3289	28.964
2400	2400	32.167	2.2917	27222.	6.7196	1493.2	6.3929	2.3358	28.964
2500	2500	32.166	2.2849	27203.	6.6996	1492.7	6.3717	2.3428	28.964
2600	2600	32.166	2.2781	27184.	6.6797	1492.2	6.3505	2.3497	28.964
2700	2700	32.166	2.2713	27166.	6.6598	1491.7	6.3294	2.3568	28.964
2800	2800	32.165	2.2645	27147.	6.6400	1491.2	6.3083	2.3638	28.964
2900	2900	32.165	2.2577	27128.	6.6202	1490.6	6.2873	2.3709	28.964
3000	3000	32.165	2.2510 + 0	27109.	6.6005 +23	1490.1	6.2664 + 9	2.3780 - 7	28.964
3100	3100	32.164	2.2442	27091.	6.5808	1489.6	6.2455	2.3851	28.964
3200	3200	32.164	2.2375	27072.	6.5611	1489.1	6.2246	2.3922	28.964
3300	3301	32.164	2.2308	27053.	6.5415	1488.5	6.2038	2.3994	28.964
3400	3401	32.164	2.2241	27034.	6.5219	1488.0	6.1831	2.4066	28.964
3500	3501	32.163	2.2174	27015.	6.5024	1487.5	6.1624	2.4138	28.964
3600	3601	32.163	2.2108	26997.	6.4830	1487.0	6.1418	2.4211	28.964
3700	3701	32.163	2.2041	26978.	6.4635	1486.4	6.1212	2.4283	28.964
3800	3801	32.162	2.1975	26959.	6.4441	1485.9	6.1007	2.4356	28.964
3900	3901	32.162	2.1909	26940.	6.4248	1485.4	6.0803	2.4430	28.964
4000	4001	32.162	2.1843 + 0	26922.	6.4055 +23	1484.9	6.0599 + 9	2.4503 - 7	28.964
4100	4101	32.161	2.1777	26903.	6.3863	1484.3	6.0395	2.4577	28.964
4200	4201	32.161	2.1711	26884.	6.3670	1483.8	6.0192	2.4651	28.964
4300	4301	32.161	2.1646	26865.	6.3479	1483.3	5.9990	2.4726	28.964
4400	4401	32.160	2.1580	26846.	6.3288	1482.8	5.9788	2.4800	28.964
4500	4501	32.160	2.1515	26828.	6.3097	1482.2	5.9587	2.4875	28.964
4600	4601	32.160	2.1450	26809.	6.2907	1481.7	5.9386	2.4951	28.964
4700	4701	32.160	2.1385	26790.	6.2717	1481.2	5.9186	2.5026	28.964
4800	4801	32.159	2.1320	26771.	6.2527	1480.7	5.8986	2.5102	28.964
4900	4901	32.159	2.1256	26753.	6.2338	1480.1	5.8787	2.5178	28.964
5000	5001	32.159	2.1191 + 0	26734.	6.2150 +23	1479.6	5.8588 + 9	2.5255 - 7	28.964
5100	5101	32.158	2.1127	26715.	6.1962	1479.1	5.8390	2.5331	28.964
5200	5201	32.158	2.1063	26696.	6.1774	1478.6	5.8192	2.5408	28.964
5300	5301	32.158	2.0999	26677.	6.1587	1478.0	5.7995	2.5485	28.964
5400	5401	32.157	2.0935	26659.	6.1400	1477.5	5.7799	2.5563	28.964
5500	5501	32.157	2.0871	26640.	6.1214	1477.0	5.7603	2.5641	28.964
5600	5602	32.157	2.0807	26621.	6.1028	1476.5	5.7407	2.5719	28.964
5700	5702	32.156	2.0744	26602.	6.0842	1475.9	5.7212	2.5797	28.964
5800	5802	32.156	2.0681	26584.	6.0657	1475.4	5.7018	2.5876	28.964
5900	5902	32.156	2.0617	26565.	6.0472	1474.9	5.6824	2.5955	28.964
6000	6002	32.156	2.0554 + 0	26546.	6.0288 +23	1474.3	5.6630 + 9	2.6034 - 7	28.964
6100	6102	32.155	2.0492	26527.	6.0104	1473.8	5.6438	2.6114	28.964
6200	6202	32.155	2.0429	26508.	5.9921	1473.3	5.6245	2.6194	28.964
6300	6302	32.155	2.0366	26490.	5.9738	1472.8	5.6053	2.6274	28.964
6400	6402	32.154	2.0304	26471.	5.9556	1472.2	5.5862	2.6355	28.964
6500	6502	32.154	2.0242	26452.	5.9373	1471.7	5.5671	2.6435	28.964
6600	6602	32.154	2.0179	26433.	5.9192	1471.2	5.5481	2.6517	28.964
6700	6702	32.153	2.0117	26414.	5.9011	1470.6	5.5291	2.6598	28.964
6800	6802	32.153	2.0056	26396.	5.8830	1470.1	5.5102	2.6680	28.964
6900	6902	32.153	1.9994	26377.	5.8649	1469.6	5.4913	2.6762	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{v}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
-1000	-1000	32.177	2.5335 + 0	27860.	7.4261 +23	1510.9	7.1485 + 9	2.1136 - 7	28.964
-900	-900	32.177	2.5262	27841.	7.4046	1510.4	7.1254	2.1197	28.964
-800	-800	32.177	2.5188	27822.	7.3831	1509.9	7.1022	2.1259	28.964
-700	-700	32.176	2.5115	27804.	7.3616	1509.3	7.0792	2.1321	28.964
-600	-600	32.176	2.5041	27785.	7.3402	1508.8	7.0561	2.1383	28.964
-500	-500	32.176	2.4968	27766.	7.3188	1508.3	7.0332	2.1446	28.964
-400	-400	32.175	2.4895	27747.	7.2975	1507.8	7.0103	2.1508	28.964
-300	-300	32.175	2.4822	27729.	7.2762	1507.3	6.9875	2.1571	28.964
-200	-200	32.175	2.4750	27710.	7.2550	1506.8	6.9647	2.1634	28.964
-100	-100	32.174	2.4677	27691.	7.2338	1506.2	6.9420	2.1698	28.964
0	0	32.174	2.4605 + 0	27672.	7.2127 +23	1505.7	6.9193 + 9	2.1761 - 7	28.964
100	100	32.174	2.4533	27654.	7.1916	1505.2	6.8967	2.1825	28.964
200	200	32.173	2.4461	27635.	7.1706	1504.7	6.8742	2.1889	28.964
300	300	32.173	2.4389	27616.	7.1496	1504.2	6.8517	2.1953	28.964
400	400	32.173	2.4317	27597.	7.1287	1503.7	6.8293	2.2018	28.964
500	500	32.173	2.4246	27578.	7.1078	1503.1	6.8069	2.2082	28.964
600	600	32.172	2.4174	27560.	7.0869	1502.6	6.7846	2.2147	28.964
700	700	32.172	2.4103	27541.	7.0661	1502.1	6.7624	2.2213	28.964
800	800	32.172	2.4032	27522.	7.0454	1501.6	6.7402	2.2278	28.964
900	900	32.171	2.3961	27503.	7.0247	1501.1	6.7181	2.2344	28.964
1000	1000	32.171	2.3891 + 0	27485.	7.0040 +23	1500.5	6.6960 + 9	2.2410 - 7	28.964
1100	1100	32.171	2.3820	27466.	6.9834	1500.0	6.6740	2.2476	28.964
1200	1200	32.170	2.3750	27447.	6.9628	1499.5	6.6520	2.2542	28.964
1300	1300	32.170	2.3680	27428.	6.9423	1499.0	6.6301	2.2609	28.964
1400	1400	32.170	2.3609	27410.	6.9218	1498.5	6.6083	2.2676	28.964
1500	1500	32.169	2.3540	27391.	6.9014	1497.9	6.5865	2.2743	28.964
1600	1600	32.169	2.3470	27372.	6.8810	1497.4	6.5647	2.2810	28.964
1700	1700	32.169	2.3400	27353.	6.8607	1496.9	6.5431	2.2878	28.964
1800	1800	32.168	2.3331	27335.	6.8404	1496.4	6.5215	2.2945	28.964
1900	1900	32.168	2.3262	27316.	6.8202	1495.9	6.4999	2.3014	28.964
2000	2000	32.168	2.3192 + 0	27297.	6.8000 +23	1495.3	6.4784 + 9	2.3082 - 7	28.964
2100	2100	32.168	2.3124	27278.	6.7798	1494.8	6.4569	2.3150	28.964
2200	2200	32.167	2.3055	27259.	6.7597	1494.3	6.4356	2.3219	28.964
2300	2300	32.167	2.2986	27241.	6.7397	1493.8	6.4142	2.3288	28.964
2400	2400	32.167	2.2918	27222.	6.7197	1493.3	6.3929	2.3358	28.964
2500	2500	32.166	2.2849	27203.	6.6997	1492.7	6.3717	2.3427	28.964
2600	2600	32.166	2.2781	27184.	6.6798	1492.2	6.3506	2.3497	28.964
2700	2700	32.166	2.2713	27166.	6.6599	1491.7	6.3294	2.3567	28.964
2800	2800	32.165	2.2645	27147.	6.6401	1491.2	6.3084	2.3638	28.964
2900	2900	32.165	2.2578	27128.	6.6203	1490.6	6.2874	2.3708	28.964
3000	3000	32.165	2.2510 + 0	27109.	6.6006 +23	1490.1	6.2664 + 9	2.3779 - 7	28.964
3100	3100	32.164	2.2443	27091.	6.5809	1489.6	6.2456	2.3850	28.964
3200	3200	32.164	2.2376	27072.	6.5612	1489.1	6.2247	2.3922	28.964
3300	3299	32.164	2.2308	27053.	6.5416	1488.5	6.2039	2.3994	28.964
3400	3399	32.164	2.2242	27034.	6.5221	1488.0	6.1832	2.4065	28.964
3500	3499	32.163	2.2175	27016.	6.5025	1487.5	6.1626	2.4138	28.964
3600	3599	32.163	2.2108	26997.	6.4831	1487.0	6.1419	2.4210	28.964
3700	3699	32.163	2.2042	26978.	6.4637	1486.5	6.1214	2.4283	28.964
3800	3799	32.162	2.1975	26959.	6.4443	1485.9	6.1009	2.4356	28.964
3900	3899	32.162	2.1909	26940.	6.4249	1485.4	6.0804	2.4429	28.964
4000	3999	32.162	2.1843 + 0	26922.	6.4057 +23	1484.9	6.0600 + 9	2.4503 - 7	28.964
4100	4099	32.161	2.1778	26903.	6.3864	1484.4	6.0397	2.4577	28.964
4200	4199	32.161	2.1712	26884.	6.3672	1483.8	6.0194	2.4651	28.964
4300	4299	32.161	2.1646	26865.	6.3481	1483.3	5.9992	2.4725	28.964
4400	4399	32.160	2.1581	26847.	6.3289	1482.8	5.9790	2.4800	28.964
4500	4499	32.160	2.1516	26828.	6.3099	1482.3	5.9589	2.4875	28.964
4600	4599	32.160	2.1451	26809.	6.2909	1481.7	5.9388	2.4950	28.964
4700	4699	32.160	2.1386	26790.	6.2719	1481.2	5.9188	2.5025	28.964
4800	4799	32.159	2.1321	26772.	6.2529	1480.7	5.8988	2.5101	28.964
4900	4899	32.159	2.1256	26753.	6.2340	1480.1	5.8789	2.5177	28.964
5000	4999	32.159	2.1192 + 0	26734.	6.2152 +23	1479.6	5.8590 + 9	2.5254 - 7	28.964
5100	5099	32.158	2.1128	26715.	6.1964	1479.1	5.8392	2.5330	28.964
5200	5199	32.158	2.1063	26696.	6.1776	1478.6	5.8195	2.5407	28.964
5300	5299	32.158	2.0999	26678.	6.1589	1478.0	5.7998	2.5484	28.964
5400	5399	32.157	2.0936	26659.	6.1403	1477.5	5.7801	2.5562	28.964
5500	5499	32.157	2.0872	26640.	6.1216	1477.0	5.7605	2.5640	28.964
5600	5598	32.157	2.0808	26621.	6.1030	1476.5	5.7410	2.5718	28.964
5700	5698	32.156	2.0745	26603.	6.0845	1475.9	5.7215	2.5796	28.964
5800	5798	32.156	2.0682	26584.	6.0660	1475.4	5.7021	2.5875	28.964
5900	5898	32.156	2.0618	26565.	6.0475	1474.9	5.6827	2.5954	28.964
6000	5998	32.156	2.0555 + 0	26546.	6.0291 +23	1474.3	5.6634 + 9	2.6033 - 7	28.964
6100	6098	32.155	2.0493	26528.	6.0108	1473.8	5.6441	2.6113	28.964
6200	6198	32.155	2.0430	26509.	5.9924	1473.3	5.6249	2.6192	28.964
6300	6298	32.155	2.0367	26490.	5.9742	1472.8	5.6057	2.6273	28.964
6400	6398	32.154	2.0305	26471.	5.9559	1472.2	5.5866	2.6353	28.964
6500	6498	32.154	2.0243	26452.	5.9377	1471.7	5.5675	2.6434	28.964
6600	6598	32.154	2.0181	26434.	5.9196	1471.2	5.5485	2.6515	28.964
6700	6698	32.153	2.0119	26415.	5.9014	1470.6	5.5295	2.6596	28.964
6800	6798	32.153	2.0057	26396.	5.8834	1470.1	5.5106	2.6678	28.964
6900	6898	32.153	1.9995	26377.	5.8654	1469.6	5.4917	2.6760	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-3</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
7000	7002	32.152	1.9932 + 0	26358.	5.8469 +23	1469.0	5.4725 + 9	2.6844 - 7	28.964
7100	7102	32.152	1.9871	26339.	5.8290	1468.5	5.4537	2.6927	28.964
7200	7202	32.152	1.9810	26321.	5.8111	1468.0	5.4350	2.7010	28.964
7300	7303	32.152	1.9749	26302.	5.7932	1467.4	5.4163	2.7093	28.964
7400	7403	32.151	1.9688	26283.	5.7754	1466.9	5.3977	2.7177	28.964
7500	7503	32.151	1.9627	26264.	5.7576	1466.4	5.3791	2.7261	28.964
7600	7603	32.151	1.9566	26245.	5.7399	1465.9	5.3606	2.7345	28.964
7700	7703	32.150	1.9506	26227.	5.7222	1465.3	5.3421	2.7430	28.964
7800	7803	32.150	1.9445	26208.	5.7045	1464.8	5.3237	2.7515	28.964
7900	7903	32.150	1.9385	26189.	5.6869	1464.3	5.3053	2.7600	28.964
8000	8003	32.149	1.9325 + 0	26170.	5.6693 +23	1463.7	5.2870 + 9	2.7685 - 7	28.964
8100	8103	32.149	1.9265	26151.	5.6518	1463.2	5.2687	2.7771	28.964
8200	8203	32.149	1.9205	26133.	5.6343	1462.7	5.2505	2.7857	28.964
8300	8303	32.148	1.9146	26114.	5.6168	1462.1	5.2324	2.7944	28.964
8400	8403	32.148	1.9086	26095.	5.5994	1461.6	5.2142	2.8031	28.964
8500	8503	32.148	1.9027	26076.	5.5820	1461.1	5.1962	2.8118	28.964
8600	8604	32.148	1.8967	26057.	5.5647	1460.5	5.1781	2.8206	28.964
8700	8704	32.147	1.8908	26039.	5.5474	1460.0	5.1602	2.8294	28.964
8800	8804	32.147	1.8849	26020.	5.5302	1459.5	5.1423	2.8382	28.964
8900	8904	32.147	1.8791	26001.	5.5130	1458.9	5.1244	2.8470	28.964
9000	9004	32.146	1.8732 + 0	25982.	5.4958 +23	1458.4	5.1066 + 9	2.8559 - 7	28.964
9100	9104	32.146	1.8673	25964.	5.4787	1457.9	5.0888	2.8648	28.964
9200	9204	32.146	1.8615	25945.	5.4616	1457.3	5.0711	2.8738	28.964
9300	9304	32.145	1.8557	25926.	5.4446	1456.8	5.0534	2.8828	28.964
9400	9404	32.145	1.8499	25907.	5.4276	1456.3	5.0357	2.8918	28.964
9500	9504	32.145	1.8441	25888.	5.4106	1455.7	5.0182	2.9009	28.964
9600	9604	32.144	1.8383	25870.	5.3937	1455.2	5.0006	2.9100	28.964
9700	9705	32.144	1.8325	25851.	5.3768	1454.6	4.9832	2.9191	28.964
9800	9805	32.144	1.8267	25832.	5.3600	1454.1	4.9657	2.9283	28.964
9900	9905	32.144	1.8210	25813.	5.3432	1453.6	4.9483	2.9375	28.964
10000	10005	32.143	1.8153 + 0	25794.	5.3264 +23	1453.0	4.9310 + 9	2.9467 - 7	28.964
10100	10105	32.143	1.8096	25776.	5.3097	1452.5	4.9137	2.9560	28.964
10200	10205	32.143	1.8039	25757.	5.2930	1452.0	4.8965	2.9653	28.964
10300	10305	32.142	1.7982	25738.	5.2764	1451.4	4.8793	2.9747	28.964
10400	10405	32.142	1.7925	25719.	5.2598	1450.9	4.8621	2.9841	28.964
10500	10505	32.142	1.7868	25700.	5.2433	1450.4	4.8450	2.9935	28.964
10600	10605	32.141	1.7812	25682.	5.2267	1449.8	4.8280	3.0030	28.964
10700	10705	32.141	1.7756	25663.	5.2103	1449.3	4.8110	3.0125	28.964
10800	10806	32.141	1.7699	25644.	5.1938	1448.7	4.7940	3.0220	28.964
10900	10906	32.140	1.7643	25625.	5.1774	1448.2	4.7771	3.0316	28.964
11000	11006	32.140	1.7587 + 0	25606.	5.1611 +23	1447.7	4.7602 + 9	3.0412 - 7	28.964
11100	11106	32.140	1.7532	25588.	5.1447	1447.1	4.7434	3.0508	28.964
11200	11206	32.139	1.7476	25569.	5.1285	1446.6	4.7266	3.0605	28.964
11300	11306	32.139	1.7421	25550.	5.1122	1446.0	4.7099	3.0702	28.964
11400	11406	32.139	1.7365	25531.	5.0960	1445.5	4.6932	3.0800	28.964
11500	11506	32.139	1.7310	25512.	5.0799	1445.0	4.6766	3.0898	28.964
11600	11606	32.138	1.7255	25494.	5.0637	1444.4	4.6600	3.0996	28.964
11700	11707	32.138	1.7200	25475.	5.0477	1443.9	4.6435	3.1095	28.964
11800	11807	32.138	1.7145	25456.	5.0316	1443.4	4.6270	3.1194	28.964
11900	11907	32.137	1.7090	25437.	5.0156	1442.8	4.6106	3.1294	28.964
12000	12007	32.137	1.7036 + 0	25418.	4.9997 +23	1442.3	4.5942 + 9	3.1393 - 7	28.964
12100	12107	32.137	1.6981	25400.	4.9837	1441.7	4.5778	3.1494	28.964
12200	12207	32.136	1.6927	25381.	4.9678	1441.2	4.5615	3.1595	28.964
12300	12307	32.136	1.6873	25362.	4.9520	1440.6	4.5453	3.1696	28.964
12400	12407	32.136	1.6819	25343.	4.9362	1440.1	4.5290	3.1797	28.964
12500	12507	32.135	1.6765	25324.	4.9204	1439.6	4.5129	3.1899	28.964
12600	12608	32.135	1.6711	25306.	4.9047	1439.0	4.4968	3.2001	28.964
12700	12708	32.135	1.6658	25287.	4.8890	1438.5	4.4807	3.2104	28.964
12800	12808	32.135	1.6604	25268.	4.8733	1437.9	4.4647	3.2207	28.964
12900	12908	32.134	1.6551	25249.	4.8577	1437.4	4.4487	3.2311	28.964
13000	13008	32.134	1.6497 + 0	25230.	4.8421 +23	1436.9	4.4327 + 9	3.2415 - 7	28.964
13100	13108	32.134	1.6444	25211.	4.8266	1436.3	4.4168	3.2519	28.964
13200	13208	32.133	1.6391	25193.	4.8111	1435.8	4.4010	3.2624	28.964
13300	13308	32.133	1.6339	25174.	4.7956	1435.2	4.3852	3.2729	28.964
13400	13409	32.133	1.6286	25155.	4.7802	1434.7	4.3694	3.2835	28.964
13500	13509	32.132	1.6233	25136.	4.7648	1434.1	4.3537	3.2941	28.964
13600	13609	32.132	1.6181	25117.	4.7495	1433.6	4.3380	3.3047	28.964
13700	13709	32.132	1.6128	25099.	4.7341	1433.1	4.3224	3.3154	28.964
13800	13809	32.131	1.6076	25080.	4.7189	1432.5	4.3068	3.3261	28.964
13900	13909	32.131	1.6024	25061.	4.7036	1432.0	4.2913	3.3369	28.964
14000	14009	32.131	1.5972 + 0	25042.	4.6884 +23	1431.4	4.2758 + 9	3.3477 - 7	28.964
14100	14110	32.131	1.5921	25023.	4.6733	1430.9	4.2603	3.3586	28.964
14200	14210	32.130	1.5869	25005.	4.6582	1430.3	4.2449	3.3695	28.964
14300	14310	32.130	1.5817	24986.	4.6431	1429.8	4.2296	3.3804	28.964
14400	14410	32.130	1.5766	24967.	4.6280	1429.2	4.2143	3.3914	28.964
14500	14510	32.129	1.5715	24948.	4.6130	1428.7	4.1990	3.4025	28.964
14600	14610	32.129	1.5663	24929.	4.5980	1428.2	4.1838	3.4136	28.964
14700	14710	32.129	1.5612	24911.	4.5831	1427.6	4.1686	3.4247	28.964
14800	14811	32.128	1.5561	24892.	4.5682	1427.1	4.1534	3.4359	28.964
14900	14911	32.128	1.5511	24873.	4.5533	1426.5	4.1383	3.4471	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
7000	6998	32.152	1.9934 + 0	26359.	5.8474 +23	1469.1	5.4729 + 9	2.6842 - 7	28.964
7100	7098	32.152	1.9873	26340.	5.8294	1468.5	5.4542	2.6925	28.964
7200	7198	32.152	1.9811	26321.	5.8115	1468.0	5.4354	2.7008	28.964
7300	7297	32.152	1.9750	26302.	5.7937	1467.5	5.4168	2.7091	28.964
7400	7397	32.151	1.9689	26283.	5.7759	1466.9	5.3982	2.7175	28.964
7500	7497	32.151	1.9629	26265.	5.7581	1466.4	5.3796	2.7258	28.964
7600	7597	32.151	1.9568	26246.	5.7403	1465.9	5.3611	2.7343	28.964
7700	7697	32.150	1.9507	26227.	5.7227	1465.3	5.3426	2.7427	28.964
7800	7797	32.150	1.9447	26208.	5.7050	1464.8	5.3242	2.7512	28.964
7900	7897	32.150	1.9387	26190.	5.6874	1464.3	5.3059	2.7597	28.964
8000	7997	32.149	1.9327 + 0	26171.	5.6698 +23	1463.7	5.2876 + 9	2.7683 - 7	28.964
8100	8097	32.149	1.9267	26152.	5.6523	1463.2	5.2693	2.7769	28.964
8200	8197	32.149	1.9207	26133.	5.6348	1462.7	5.2511	2.7855	28.964
8300	8297	32.148	1.9148	26114.	5.6174	1462.1	5.2330	2.7941	28.964
8400	8397	32.148	1.9088	26096.	5.6000	1461.6	5.2148	2.8028	28.964
8500	8497	32.148	1.9029	26077.	5.5826	1461.1	5.1968	2.8115	28.964
8600	8596	32.148	1.8969	26058.	5.5653	1460.5	5.1788	2.8203	28.964
8700	8696	32.147	1.8910	26039.	5.5481	1460.0	5.1608	2.8290	28.964
8800	8796	32.147	1.8852	26021.	5.5308	1459.5	5.1429	2.8378	28.964
8900	8896	32.147	1.8793	26002.	5.5136	1458.9	5.1251	2.8467	28.964
9000	8996	32.146	1.8734 + 0	25983.	5.4965 +23	1458.4	5.1072 + 9	2.8556 - 7	28.964
9100	9096	32.146	1.8676	25964.	5.4794	1457.9	5.0895	2.8645	28.964
9200	9196	32.146	1.8617	25945.	5.4623	1457.3	5.0718	2.8734	28.964
9300	9296	32.145	1.8559	25927.	5.4453	1456.8	5.0541	2.8824	28.964
9400	9396	32.145	1.8501	25908.	5.4283	1456.3	5.0365	2.8914	28.964
9500	9496	32.145	1.8443	25889.	5.4114	1455.7	5.0189	2.9005	28.964
9600	9596	32.144	1.8385	25870.	5.3944	1455.2	5.0014	2.9096	28.964
9700	9695	32.144	1.8328	25852.	5.3776	1454.7	4.9839	2.9187	28.964
9800	9795	32.144	1.8270	25833.	5.3608	1454.1	4.9665	2.9279	28.964
9900	9895	32.144	1.8213	25814.	5.3440	1453.6	4.9491	2.9371	28.964
10000	9995	32.143	1.8155 + 0	25795.	5.3272 +23	1453.1	4.9318 + 9	2.9463 - 7	28.964
10100	10095	32.143	1.8098	25776.	5.3105	1452.5	4.9145	2.9556	28.964
10200	10195	32.143	1.8041	25758.	5.2939	1452.0	4.8973	2.9649	28.964
10300	10295	32.142	1.7985	25739.	5.2772	1451.5	4.8801	2.9742	28.964
10400	10395	32.142	1.7928	25720.	5.2607	1450.9	4.8630	2.9836	28.964
10500	10495	32.142	1.7871	25701.	5.2441	1450.4	4.8459	2.9930	28.964
10600	10595	32.141	1.7815	25683.	5.2276	1449.8	4.8289	3.0024	28.964
10700	10695	32.141	1.7759	25664.	5.2112	1449.3	4.8119	3.0119	28.964
10800	10794	32.141	1.7703	25645.	5.1947	1448.8	4.7949	3.0215	28.964
10900	10894	32.140	1.7647	25626.	5.1784	1448.2	4.7781	3.0310	28.964
11000	10994	32.140	1.7591 + 0	25607.	5.1620 +23	1447.7	4.7612 + 9	3.0406 - 7	28.964
11100	11094	32.140	1.7535	25589.	5.1457	1447.2	4.7444	3.0502	28.964
11200	11194	32.140	1.7479	25570.	5.1294	1446.6	4.7277	3.0599	28.964
11300	11294	32.139	1.7424	25551.	5.1132	1446.1	4.7109	3.0696	28.964
11400	11394	32.139	1.7369	25532.	5.0970	1445.5	4.6943	3.0794	28.964
11500	11494	32.139	1.7313	25514.	5.0809	1445.0	4.6777	3.0892	28.964
11600	11594	32.138	1.7258	25495.	5.0648	1444.5	4.6611	3.0990	28.964
11700	11693	32.138	1.7203	25476.	5.0487	1443.9	4.6446	3.1088	28.964
11800	11793	32.138	1.7149	25457.	5.0327	1443.4	4.6281	3.1187	28.964
11900	11893	32.137	1.7094	25438.	5.0167	1442.8	4.6117	3.1287	28.964
12000	11993	32.137	1.7040 + 0	25420.	5.0008 +23	1442.3	4.5953 + 9	3.1387 - 7	28.964
12100	12093	32.137	1.6985	25401.	4.9848	1441.8	4.5790	3.1487	28.964
12200	12193	32.136	1.6931	25382.	4.9690	1441.2	4.5627	3.1587	28.964
12300	12293	32.136	1.6877	25363.	4.9531	1440.7	4.5464	3.1688	28.964
12400	12393	32.136	1.6823	25345.	4.9373	1440.1	4.5302	3.1790	28.964
12500	12493	32.136	1.6769	25326.	4.9216	1439.6	4.5141	3.1891	28.964
12600	12592	32.135	1.6715	25307.	4.9059	1439.1	4.4980	3.1994	28.964
12700	12692	32.135	1.6662	25288.	4.8902	1438.5	4.4819	3.2096	28.964
12800	12792	32.135	1.6608	25269.	4.8746	1438.0	4.4659	3.2199	28.964
12900	12892	32.134	1.6555	25251.	4.8590	1437.4	4.4499	3.2303	28.964
13000	12992	32.134	1.6502 + 0	25232.	4.8434 +23	1436.9	4.4340 + 9	3.2406 - 7	28.964
13100	13092	32.134	1.6449	25213.	4.8279	1436.4	4.4181	3.2511	28.964
13200	13192	32.133	1.6396	25194.	4.8124	1435.8	4.4023	3.2615	28.964
13300	13292	32.133	1.6343	25175.	4.7969	1435.3	4.3865	3.2720	28.964
13400	13391	32.133	1.6290	25157.	4.7815	1434.7	4.3708	3.2826	28.964
13500	13491	32.132	1.6238	25138.	4.7662	1434.2	4.3551	3.2931	28.964
13600	13591	32.132	1.6185	25119.	4.7508	1433.6	4.3394	3.3038	28.964
13700	13691	32.132	1.6133	25100.	4.7355	1433.1	4.3238	3.3144	28.964
13800	13791	32.132	1.6081	25082.	4.7203	1432.6	4.3082	3.3252	28.964
13900	13891	32.131	1.6029	25063.	4.7050	1432.0	4.2927	3.3359	28.964
14000	13991	32.131	1.5977 + 0	25044.	4.6899 +23	1431.5	4.2772 + 9	3.3467 - 7	28.964
14100	14090	32.131	1.5925	25025.	4.6747	1430.9	4.2618	3.3576	28.964
14200	14190	32.130	1.5874	25006.	4.6596	1430.4	4.2464	3.3684	28.964
14300	14290	32.130	1.5822	24988.	4.6445	1429.8	4.2311	3.3794	28.964
14400	14390	32.130	1.5771	24969.	4.6295	1429.3	4.2158	3.3903	28.964
14500	14490	32.129	1.5720	24950.	4.6145	1428.8	4.2005	3.4014	28.964
14600	14590	32.129	1.5669	24931.	4.5996	1428.2	4.1853	3.4124	28.964
14700	14690	32.129	1.5618	24912.	4.5846	1427.7	4.1701	3.4235	28.964
14800	14790	32.128	1.5567	24894.	4.5698	1427.1	4.1550	3.4347	28.964
14900	14889	32.128	1.5516	24875.	4.5549	1426.6	4.1399	3.4459	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g, \text{ft sec}^{-2}$	Specific weight $\omega, \text{lb ft}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{ft}$	Number density $n, \text{ft}^{-3}$	Particle speed $\bar{V}, \text{ft sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{ft}$	Molecular weight $M$
H, ft	Z, ft								
15000	15011	32.128	1.5460 + 0	24854.	4.5385 +23	1426.0	4.1233 + 9	3.4583 - 7	28.964
15100	15111	32.127	1.5410	24835.	4.5237	1425.4	4.1083	3.4696	28.964
15200	15211	32.127	1.5359	24816.	4.5090	1424.9	4.0933	3.4810	28.964
15300	15311	32.127	1.5309	24798.	4.4942	1424.3	4.0784	3.4924	28.964
15400	15411	32.127	1.5259	24779.	4.4796	1423.8	4.0635	3.5038	28.964
15500	15512	32.126	1.5209	24760.	4.4649	1423.2	4.0487	3.5153	28.964
15600	15612	32.126	1.5159	24741.	4.4503	1422.7	4.0339	3.5269	28.964
15700	15712	32.126	1.5109	24722.	4.4358	1422.1	4.0191	3.5384	28.964
15800	15812	32.125	1.5059	24704.	4.4212	1421.6	4.0044	3.5501	28.964
15900	15912	32.125	1.5010	24685.	4.4067	1421.0	3.9897	3.5617	28.964
16000	16012	32.125	1.4960 + 0	24666.	4.3923 +23	1420.5	3.9751 + 9	3.5735 - 7	28.964
16100	16112	32.124	1.4911	24647.	4.3778	1419.9	3.9605	3.5852	28.964
16200	16213	32.124	1.4862	24628.	4.3635	1419.4	3.9460	3.5971	28.964
16300	16313	32.124	1.4813	24609.	4.3491	1418.8	3.9315	3.6089	28.964
16400	16413	32.123	1.4764	24591.	4.3348	1418.3	3.9170	3.6209	28.964
16500	16513	32.123	1.4715	24572.	4.3205	1417.7	3.9026	3.6328	28.964
16600	16613	32.123	1.4667	24553.	4.3063	1417.2	3.8882	3.6448	28.964
16700	16713	32.123	1.4618	24534.	4.2921	1416.6	3.8739	3.6569	28.964
16800	16814	32.122	1.4570	24515.	4.2779	1416.1	3.8596	3.6690	28.964
16900	16914	32.122	1.4521	24497.	4.2638	1415.5	3.8454	3.6812	28.964
17000	17014	32.122	1.4473 + 0	24478.	4.2497 +23	1415.0	3.8311 + 9	3.6934 - 7	28.964
17100	17114	32.121	1.4425	24459.	4.2356	1414.4	3.8170	3.7057	28.964
17200	17214	32.121	1.4377	24440.	4.2216	1413.9	3.8029	3.7180	28.964
17300	17314	32.121	1.4330	24421.	4.2076	1413.3	3.7888	3.7303	28.964
17400	17415	32.120	1.4282	24402.	4.1936	1412.8	3.7747	3.7427	28.964
17500	17515	32.120	1.4234	24384.	4.1797	1412.2	3.7607	3.7552	28.964
17600	17615	32.120	1.4187	24365.	4.1658	1411.7	3.7468	3.7677	28.964
17700	17715	32.119	1.4140	24346.	4.1520	1411.1	3.7329	3.7803	28.964
17800	17815	32.119	1.4092	24327.	4.1381	1410.6	3.7190	3.7929	28.964
17900	17915	32.119	1.4045	24308.	4.1244	1410.0	3.7051	3.8056	28.964
18000	18016	32.119	1.3998 + 0	24289.	4.1106 +23	1409.5	3.6913 + 9	3.8183 - 7	28.964
18100	18116	32.118	1.3952	24271.	4.0969	1408.9	3.6776	3.8311	28.964
18200	18216	32.118	1.3905	24252.	4.0832	1408.4	3.6639	3.8439	28.964
18300	18316	32.118	1.3858	24233.	4.0696	1407.8	3.6502	3.8568	28.964
18400	18416	32.117	1.3812	24214.	4.0560	1407.3	3.6366	3.8697	28.964
18500	18516	32.117	1.3766	24195.	4.0424	1406.7	3.6230	3.8827	28.964
18600	18617	32.117	1.3719	24176.	4.0289	1406.2	3.6094	3.8958	28.964
18700	18717	32.116	1.3673	24158.	4.0154	1405.6	3.5959	3.9089	28.964
18800	18817	32.116	1.3627	24139.	4.0019	1405.0	3.5824	3.9220	28.964
18900	18917	32.116	1.3581	24120.	3.9885	1404.5	3.5690	3.9352	28.964
19000	19017	32.115	1.3536 + 0	24101.	3.9751 +23	1403.9	3.5556 + 9	3.9485 - 7	28.964
19100	19118	32.115	1.3490	24082.	3.9617	1403.4	3.5423	3.9618	28.964
19200	19218	32.115	1.3444	24064.	3.9484	1402.8	3.5289	3.9752	28.964
19300	19318	32.115	1.3399	24045.	3.9351	1402.3	3.5157	3.9886	28.964
19400	19418	32.114	1.3354	24026.	3.9219	1401.7	3.5024	4.0021	28.964
19500	19518	32.114	1.3309	24007.	3.9086	1401.2	3.4892	4.0156	28.964
19600	19618	32.114	1.3264	23988.	3.8954	1400.6	3.4761	4.0292	28.964
19700	19719	32.113	1.3219	23969.	3.8823	1400.0	3.4630	4.0429	28.964
19800	19819	32.113	1.3174	23951.	3.8692	1399.5	3.4499	4.0566	28.964
19900	19919	32.113	1.3129	23932.	3.8561	1398.9	3.4368	4.0704	28.964
20000	20019	32.112	1.3085 + 0	23913.	3.8430 +23	1398.4	3.4238 + 9	4.0842 - 7	28.964
20100	20119	32.112	1.3040	23894.	3.8300	1397.8	3.4109	4.0981	28.964
20200	20220	32.112	1.2996	23875.	3.8170	1397.3	3.3980	4.1120	28.964
20300	20320	32.111	1.2952	23856.	3.8040	1396.7	3.3851	4.1260	28.964
20400	20420	32.111	1.2907	23838.	3.7911	1396.1	3.3722	4.1401	28.964
20500	20520	32.111	1.2863	23819.	3.7782	1395.6	3.3594	4.1542	28.964
20600	20620	32.111	1.2820	23800.	3.7654	1395.0	3.3467	4.1684	28.964
20700	20721	32.110	1.2776	23781.	3.7526	1394.5	3.3339	4.1826	28.964
20800	20821	32.110	1.2732	23762.	3.7398	1393.9	3.3212	4.1969	28.964
20900	20921	32.110	1.2689	23743.	3.7270	1393.3	3.3086	4.2113	28.964
21000	21021	32.109	1.2645 + 0	23725.	3.7143 +23	1392.8	3.2960 + 9	4.2257 - 7	28.964
21100	21121	32.109	1.2602	23706.	3.7016	1392.2	3.2834	4.2402	28.964
21200	21222	32.109	1.2559	23687.	3.6890	1391.7	3.2708	4.2547	28.964
21300	21322	32.108	1.2516	23668.	3.6764	1391.1	3.2583	4.2694	28.964
21400	21422	32.108	1.2473	23649.	3.6638	1390.5	3.2459	4.2840	28.964
21500	21522	32.108	1.2430	23630.	3.6512	1390.0	3.2335	4.2988	28.964
21600	21622	32.107	1.2387	23611.	3.6387	1389.4	3.2211	4.3135	28.964
21700	21723	32.107	1.2344	23593.	3.6262	1388.9	3.2087	4.3284	28.964
21800	21823	32.107	1.2302	23574.	3.6137	1388.3	3.1964	4.3433	28.964
21900	21923	32.107	1.2259	23555.	3.6013	1387.7	3.1841	4.3583	28.964
22000	22023	32.106	1.2217 + 0	23536.	3.5889 +23	1387.2	3.1719 + 9	4.3733 - 7	28.964
22100	22123	32.106	1.2175	23517.	3.5766	1386.6	3.1597	4.3885	28.964
22200	22224	32.106	1.2133	23498.	3.5643	1386.1	3.1475	4.4036	28.964
22300	22324	32.105	1.2091	23480.	3.5520	1385.5	3.1354	4.4189	28.964
22400	22424	32.105	1.2049	23461.	3.5397	1384.9	3.1233	4.4342	28.964
22500	22524	32.105	1.2007	23442.	3.5275	1384.4	3.1113	4.4495	28.964
22600	22625	32.104	1.1966	23423.	3.5153	1383.8	3.0992	4.4650	28.964
22700	22725	32.104	1.1924	23404.	3.5031	1383.2	3.0873	4.4805	28.964
22800	22825	32.104	1.1883	23385.	3.4910	1382.7	3.0753	4.4961	28.964
22900	22925	32.103	1.1842	23367.	3.4789	1382.1	3.0634	4.5117	28.964



## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{v}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
15000	14989	32.128	1.5465 + 0	24856.	4.5401 +23	1426.0	4.1249 + 9	3.4571 - 7	28.964
15100	15089	32.128	1.5415	24837.	4.5253	1425.5	4.1099	3.4684	28.964
15200	15189	32.127	1.5365	24819.	4.5106	1424.9	4.0950	3.4797	28.964
15300	15289	32.127	1.5314	24800.	4.4959	1424.4	4.0800	3.4911	28.964
15400	15389	32.127	1.5264	24781.	4.4812	1423.8	4.0652	3.5025	28.964
15500	15488	32.126	1.5214	24762.	4.4666	1423.3	4.0504	3.5140	28.964
15600	15588	32.126	1.5165	24743.	4.4520	1422.7	4.0356	3.5255	28.964
15700	15688	32.126	1.5115	24725.	4.4375	1422.2	4.0208	3.5371	28.964
15800	15788	32.125	1.5065	24706.	4.4230	1421.7	4.0061	3.5487	28.964
15900	15888	32.125	1.5016	24687.	4.4085	1421.1	3.9915	3.5603	28.964
16000	15988	32.125	1.4967 + 0	24668.	4.3940 +23	1420.6	3.9769 + 9	3.5720 - 7	28.964
16100	16088	32.124	1.4917	24649.	4.3796	1420.0	3.9623	3.5838	28.964
16200	16187	32.124	1.4868	24631.	4.3653	1419.5	3.9478	3.5956	28.964
16300	16287	32.124	1.4819	24612.	4.3509	1418.9	3.9333	3.6074	28.964
16400	16387	32.124	1.4770	24593.	4.3366	1418.4	3.9189	3.6193	28.964
16500	16487	32.123	1.4722	24574.	4.3224	1417.8	3.9045	3.6313	28.964
16600	16587	32.123	1.4673	24555.	4.3081	1417.3	3.8901	3.6432	28.964
16700	16687	32.123	1.4625	24537.	4.2940	1416.7	3.8758	3.6553	28.964
16800	16786	32.122	1.4576	24518.	4.2798	1416.2	3.8615	3.6674	28.964
16900	16886	32.122	1.4528	24499.	4.2657	1415.6	3.8473	3.6795	28.964
17000	16986	32.122	1.4480 + 0	24480.	4.2516 +23	1415.1	3.8331 + 9	3.6917 - 7	28.964
17100	17086	32.121	1.4432	24462.	4.2376	1414.5	3.8190	3.7039	28.964
17200	17186	32.121	1.4384	24443.	4.2236	1414.0	3.8049	3.7162	28.964
17300	17286	32.121	1.4336	24424.	4.2096	1413.4	3.7908	3.7286	28.964
17400	17385	32.120	1.4289	24405.	4.1956	1412.9	3.7768	3.7409	28.964
17500	17485	32.120	1.4241	24386.	4.1817	1412.3	3.7628	3.7534	28.964
17600	17585	32.120	1.4194	24368.	4.1679	1411.8	3.7488	3.7659	28.964
17700	17685	32.120	1.4147	24349.	4.1540	1411.2	3.7349	3.7784	28.964
17800	17785	32.119	1.4100	24330.	4.1402	1410.7	3.7211	3.7910	28.964
17900	17885	32.119	1.4053	24311.	4.1265	1410.1	3.7073	3.8036	28.964
18000	17984	32.119	1.4006 + 0	24292.	4.1128 +23	1409.6	3.6935 + 9	3.8163 - 7	28.964
18100	18084	32.118	1.3959	24274.	4.0991	1409.0	3.6798	3.8291	28.964
18200	18184	32.118	1.3912	24255.	4.0854	1408.5	3.6661	3.8419	28.964
18300	18284	32.118	1.3866	24236.	4.0718	1407.9	3.6524	3.8547	28.964
18400	18384	32.117	1.3819	24217.	4.0582	1407.3	3.6388	3.8676	28.964
18500	18484	32.117	1.3773	24198.	4.0446	1406.8	3.6252	3.8806	28.964
18600	18583	32.117	1.3727	24180.	4.0311	1406.2	3.6117	3.8936	28.964
18700	18683	32.116	1.3681	24161.	4.0176	1405.7	3.5982	3.9067	28.964
18800	18783	32.116	1.3635	24142.	4.0042	1405.1	3.5847	3.9198	28.964
18900	18883	32.116	1.3589	24123.	3.9908	1404.6	3.5713	3.9330	28.964
19000	18983	32.115	1.3544 + 0	24104.	3.9774 +23	1404.0	3.5579 + 9	3.9462 - 7	28.964
19100	19083	32.115	1.3498	24086.	3.9641	1403.5	3.5446	3.9595	28.964
19200	19182	32.115	1.3453	24067.	3.9508	1402.9	3.5313	3.9728	28.964
19300	19282	32.115	1.3407	24048.	3.9375	1402.4	3.5180	3.9862	28.964
19400	19382	32.114	1.3362	24029.	3.9242	1401.8	3.5048	3.9997	28.964
19500	19482	32.114	1.3317	24010.	3.9110	1401.3	3.4916	4.0132	28.964
19600	19582	32.114	1.3272	23992.	3.8979	1400.7	3.4785	4.0267	28.964
19700	19681	32.113	1.3227	23973.	3.8847	1400.1	3.4654	4.0404	28.964
19800	19781	32.113	1.3182	23954.	3.8716	1399.6	3.4523	4.0540	28.964
19900	19881	32.113	1.3138	23935.	3.8585	1399.0	3.4393	4.0678	28.964
20000	19981	32.112	1.3093 + 0	23916.	3.8455 +23	1398.5	3.4263 + 9	4.0816 - 7	28.964
20100	20081	32.112	1.3049	23898.	3.8325	1397.9	3.4134	4.0954	28.964
20200	20180	32.112	1.3004	23879.	3.8195	1397.4	3.4005	4.1093	28.964
20300	20280	32.111	1.2960	23860.	3.8066	1396.8	3.3876	4.1233	28.964
20400	20380	32.111	1.2916	23841.	3.7937	1396.2	3.3748	4.1373	28.964
20500	20480	32.111	1.2872	23822.	3.7808	1395.7	3.3620	4.1514	28.964
20600	20580	32.111	1.2828	23804.	3.7680	1395.1	3.3492	4.1655	28.964
20700	20679	32.110	1.2785	23785.	3.7552	1394.6	3.3365	4.1797	28.964
20800	20779	32.110	1.2741	23766.	3.7424	1394.0	3.3239	4.1940	28.964
20900	20879	32.110	1.2698	23747.	3.7297	1393.5	3.3112	4.2083	28.964
21000	20979	32.109	1.2654 + 0	23728.	3.7170 +23	1392.9	3.2986 + 9	4.2227 - 7	28.964
21100	21079	32.109	1.2611	23710.	3.7043	1392.3	3.2861	4.2371	28.964
21200	21178	32.109	1.2568	23691.	3.6917	1391.8	3.2735	4.2516	28.964
21300	21278	32.108	1.2525	23672.	3.6791	1391.2	3.2611	4.2662	28.964
21400	21378	32.108	1.2482	23653.	3.6665	1390.7	3.2486	4.2808	28.964
21500	21478	32.108	1.2439	23634.	3.6540	1390.1	3.2362	4.2955	28.964
21600	21578	32.107	1.2397	23616.	3.6415	1389.5	3.2238	4.3102	28.964
21700	21677	32.107	1.2354	23597.	3.6290	1389.0	3.2115	4.3250	28.964
21800	21777	32.107	1.2312	23578.	3.6166	1388.4	3.1992	4.3399	28.964
21900	21877	32.107	1.2269	23559.	3.6042	1387.9	3.1869	4.3549	28.964
22000	21977	32.106	1.2227 + 0	23540.	3.5918 +23	1387.3	3.1747 + 9	4.3699 - 7	28.964
22100	22077	32.106	1.2185	23522.	3.5795	1386.7	3.1625	4.3849	28.964
22200	22176	32.106	1.2143	23503.	3.5672	1386.2	3.1504	4.4000	28.964
22300	22276	32.105	1.2101	23484.	3.5549	1385.6	3.1383	4.4152	28.964
22400	22376	32.105	1.2059	23465.	3.5426	1385.1	3.1262	4.4305	28.964
22500	22476	32.105	1.2018	23446.	3.5304	1384.5	3.1142	4.4458	28.964
22600	22576	32.104	1.1976	23428.	3.5183	1383.9	3.1022	4.4612	28.964
22700	22675	32.104	1.1934	23409.	3.5061	1383.4	3.0902	4.4767	28.964
22800	22775	32.104	1.1893	23390.	3.4940	1382.8	3.0783	4.4922	28.964
22900	22875	32.104	1.1852	23371.	3.4819	1382.3	3.0664	4.5078	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
23000	23025	32.103	1.1800 + 0	23348.	3.4668 +23	1381.5	3.0515 + 9	4.5274 - 7	28.964
23100	23126	32.103	1.1759	23329.	3.4548	1381.0	3.0397	4.5432	28.964
23200	23226	32.102	1.1718	23310.	3.4428	1380.4	3.0279	4.5590	28.964
23300	23326	32.102	1.1677	23291.	3.4308	1379.9	3.0161	4.5749	28.964
23400	23426	32.102	1.1637	23272.	3.4189	1379.3	3.0044	4.5909	28.964
23500	23527	32.102	1.1596	23253.	3.4070	1378.7	2.9927	4.6069	28.964
23600	23627	32.101	1.1556	23235.	3.3951	1378.2	2.9811	4.6230	28.964
23700	23727	32.101	1.1515	23216.	3.3833	1377.6	2.9694	4.6392	28.964
23800	23827	32.101	1.1475	23197.	3.3714	1377.0	2.9579	4.6555	28.964
23900	23927	32.100	1.1435	23178.	3.3597	1376.5	2.9463	4.6718	28.964
24000	24028	32.100	1.1395 + 0	23159.	3.3479 +23	1375.9	2.9348 + 9	4.6882 - 7	28.964
24100	24128	32.100	1.1355	23140.	3.3362	1375.3	2.9233	4.7047	28.964
24200	24228	32.099	1.1315	23122.	3.3245	1374.8	2.9119	4.7212	28.964
24300	24328	32.099	1.1275	23103.	3.3129	1374.2	2.9005	4.7378	28.964
24400	24429	32.099	1.1235	23084.	3.3012	1373.6	2.8891	4.7545	28.964
24500	24529	32.098	1.1196	23065.	3.2896	1373.1	2.8778	4.7712	28.964
24600	24629	32.098	1.1156	23046.	3.2781	1372.5	2.8665	4.7881	28.964
24700	24729	32.098	1.1117	23027.	3.2666	1371.9	2.8552	4.8050	28.964
24800	24830	32.098	1.1078	23008.	3.2551	1371.4	2.8440	4.8219	28.964
24900	24930	32.097	1.1039	22990.	3.2436	1370.8	2.8328	4.8390	28.964
25000	25030	32.097	1.0999 + 0	22971.	3.2321 +23	1370.2	2.8216 + 9	4.8561 - 7	28.964
25100	25130	32.097	1.0961	22952.	3.2207	1369.6	2.8105	4.8733	28.964
25200	25230	32.096	1.0922	22933.	3.2094	1369.1	2.7994	4.8906	28.964
25300	25331	32.096	1.0883	22914.	3.1980	1368.5	2.7884	4.9079	28.964
25400	25431	32.096	1.0844	22895.	3.1867	1367.9	2.7773	4.9253	28.964
25500	25531	32.095	1.0806	22876.	3.1754	1367.4	2.7664	4.9428	28.964
25600	25631	32.095	1.0768	22858.	3.1642	1366.8	2.7554	4.9604	28.964
25700	25732	32.095	1.0729	22839.	3.1530	1366.2	2.7445	4.9781	28.964
25800	25832	32.094	1.0691	22820.	3.1418	1365.7	2.7336	4.9958	28.964
25900	25932	32.094	1.0653	22801.	3.1306	1365.1	2.7228	5.0136	28.964
26000	26032	32.094	1.0615 + 0	22782.	3.1195 +23	1364.5	2.7119 + 9	5.0315 - 7	28.964
26100	26133	32.094	1.0577	22763.	3.1084	1363.9	2.7012	5.0495	28.964
26200	26233	32.093	1.0539	22744.	3.0973	1363.4	2.6904	5.0675	28.964
26300	26333	32.093	1.0502	22726.	3.0863	1362.8	2.6797	5.0856	28.964
26400	26433	32.093	1.0464	22707.	3.0753	1362.2	2.6690	5.1039	28.964
26500	26534	32.092	1.0427	22688.	3.0643	1361.7	2.6584	5.1221	28.964
26600	26634	32.092	1.0389	22669.	3.0533	1361.1	2.6478	5.1405	28.964
26700	26734	32.092	1.0352	22650.	3.0424	1360.5	2.6372	5.1590	28.964
26800	26834	32.091	1.0315	22631.	3.0315	1359.9	2.6266	5.1775	28.964
26900	26935	32.091	1.0278	22612.	3.0207	1359.4	2.6161	5.1961	28.964
27000	27035	32.091	1.0241 + 0	22594.	3.0098 +23	1358.8	2.6056 + 9	5.2148 - 7	28.964
27100	27135	32.090	1.0204	22575.	2.9990	1358.2	2.5952	5.2336	28.964
27200	27236	32.090	1.0167	22556.	2.9883	1357.6	2.5848	5.2524	28.964
27300	27336	32.090	1.0131	22537.	2.9775	1357.1	2.5744	5.2714	28.964
27400	27436	32.090	1.0094	22518.	2.9668	1356.5	2.5641	5.2904	28.964
27500	27536	32.089	1.0058	22499.	2.9561	1355.9	2.5537	5.3095	28.964
27600	27637	32.089	1.0021	22480.	2.9455	1355.3	2.5435	5.3287	28.964
27700	27737	32.089	9.9851 - 1	22462.	2.9348	1354.8	2.5332	5.3480	28.964
27800	27837	32.088	9.9490	22443.	2.9243	1354.2	2.5230	5.3674	28.964
27900	27937	32.088	9.9130	22424.	2.9137	1353.6	2.5128	5.3869	28.964
28000	28038	32.088	9.8770 - 1	22405.	2.9032 +23	1353.0	2.5027 + 9	5.4064 - 7	28.964
28100	28138	32.087	9.8412	22386.	2.8927	1352.5	2.4925	5.4260	28.964
28200	28238	32.087	9.8054	22367.	2.8822	1351.9	2.4825	5.4458	28.964
28300	28338	32.087	9.7698	22348.	2.8717	1351.3	2.4724	5.4656	28.964
28400	28439	32.086	9.7343	22330.	2.8613	1350.7	2.4624	5.4855	28.964
28500	28539	32.086	9.6988	22311.	2.8509	1350.2	2.4524	5.5055	28.964
28600	28639	32.086	9.6635	22292.	2.8406	1349.6	2.4424	5.5256	28.964
28700	28740	32.086	9.6282	22273.	2.8302	1349.0	2.4325	5.5457	28.964
28800	28840	32.085	9.5931	22254.	2.8199	1348.4	2.4226	5.5660	28.964
28900	28940	32.085	9.5581	22235.	2.8096	1347.9	2.4128	5.5863	28.964
29000	29040	32.085	9.5231 - 1	22216.	2.7994 +23	1347.3	2.4029 + 9	5.6068 - 7	28.964
29100	29141	32.084	9.4883	22198.	2.7892	1346.7	2.3931	5.6273	28.964
29200	29241	32.084	9.4535	22179.	2.7790	1346.1	2.3834	5.6480	28.964
29300	29341	32.084	9.4189	22160.	2.7688	1345.5	2.3736	5.6687	28.964
29400	29442	32.083	9.3843	22141.	2.7587	1345.0	2.3639	5.6895	28.964
29500	29542	32.083	9.3498	22122.	2.7486	1344.4	2.3543	5.7104	28.964
29600	29642	32.083	9.3155	22103.	2.7385	1343.8	2.3446	5.7314	28.964
29700	29742	32.082	9.2812	22084.	2.7285	1343.2	2.3350	5.7525	28.964
29800	29843	32.082	9.2470	22065.	2.7185	1342.6	2.3254	5.7737	28.964
29900	29943	32.082	9.2130	22047.	2.7085	1342.1	2.3159	5.7950	28.964
30000	30043	32.082	9.1790 - 1	22028.	2.6985 +23	1341.5	2.3064 + 9	5.8164 - 7	28.964
30100	30144	32.081	9.1451	22009.	2.6886	1340.9	2.2969	5.8379	28.964
30200	30244	32.081	9.1113	21990.	2.6787	1340.3	2.2874	5.8595	28.964
30300	30344	32.081	9.0777	21971.	2.6688	1339.7	2.2780	5.8812	28.964
30400	30444	32.080	9.0441	21952.	2.6589	1339.1	2.2686	5.9030	28.964
30500	30545	32.080	9.0106	21933.	2.6491	1338.6	2.2592	5.9249	28.964
30600	30645	32.080	8.9772	21914.	2.6393	1338.0	2.2499	5.9469	28.964
30700	30745	32.079	8.9439	21896.	2.6296	1337.4	2.2406	5.9689	28.964
30800	30846	32.079	8.9106	21877.	2.6198	1336.8	2.2313	5.9911	28.964
30900	30946	32.079	8.8775	21858.	2.6101	1336.2	2.2221	6.0134	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $V$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
23000	22975	32.103	1.1811 + 0	23352.	3.4699 +23	1381.7	3.0545 + 9	4.5234 - 7	28.964
23100	23074	32.103	1.1770	23334.	3.4579	1381.1	3.0427	4.5391	28.964
23200	23174	32.103	1.1729	23315.	3.4459	1380.6	3.0309	4.5549	28.964
23300	23274	32.102	1.1688	23296.	3.4339	1380.0	3.0192	4.5708	28.964
23400	23374	32.102	1.1647	23277.	3.4220	1379.4	3.0075	4.5867	28.964
23500	23474	32.102	1.1607	23258.	3.4101	1378.9	2.9958	4.6027	28.964
23600	23573	32.101	1.1566	23240.	3.3983	1378.3	2.9842	4.6187	28.964
23700	23673	32.101	1.1526	23221.	3.3864	1377.7	2.9726	4.6349	28.964
23800	23773	32.101	1.1486	23202.	3.3746	1377.2	2.9610	4.6511	28.964
23900	23873	32.100	1.1446	23183.	3.3629	1376.6	2.9495	4.6673	28.964
24000	23972	32.100	1.1406 + 0	23164.	3.3512 +23	1376.0	2.9380 + 9	4.6837 - 7	28.964
24100	24072	32.100	1.1366	23146.	3.3395	1375.5	2.9265	4.7001	28.964
24200	24172	32.100	1.1326	23127.	3.3278	1374.9	2.9151	4.7165	28.964
24300	24272	32.099	1.1286	23108.	3.3161	1374.4	2.9037	4.7331	28.964
24400	24371	32.099	1.1247	23089.	3.3045	1373.8	2.8924	4.7497	28.964
24500	24471	32.099	1.1207	23070.	3.2930	1373.2	2.8810	4.7664	28.964
24600	24571	32.098	1.1168	23052.	3.2814	1372.7	2.8698	4.7832	28.964
24700	24671	32.098	1.1128	23033.	3.2699	1372.1	2.8585	4.8000	28.964
24800	24771	32.098	1.1089	23014.	3.2584	1371.5	2.8473	4.8169	28.964
24900	24870	32.097	1.1050	22995.	3.2470	1371.0	2.8361	4.8339	28.964
25000	24970	32.097	1.1011 + 0	22976.	3.2356 +23	1370.4	2.8250 + 9	4.8510 - 7	28.964
25100	25070	32.097	1.0972	22958.	3.2242	1369.8	2.8139	4.8681	28.964
25200	25170	32.096	1.0934	22939.	3.2128	1369.3	2.8028	4.8853	28.964
25300	25269	32.096	1.0895	22920.	3.2015	1368.7	2.7918	4.9026	28.964
25400	25369	32.096	1.0856	22901.	3.1902	1368.1	2.7808	4.9200	28.964
25500	25469	32.096	1.0818	22882.	3.1789	1367.5	2.7698	4.9374	28.964
25600	25569	32.095	1.0780	22864.	3.1677	1367.0	2.7588	4.9549	28.964
25700	25668	32.095	1.0741	22845.	3.1565	1366.4	2.7479	4.9725	28.964
25800	25768	32.095	1.0703	22826.	3.1453	1365.8	2.7371	4.9901	28.964
25900	25868	32.094	1.0665	22807.	3.1342	1365.3	2.7262	5.0079	28.964
26000	25968	32.094	1.0627 + 0	22788.	3.1231 +23	1364.7	2.7154 + 9	5.0257 - 7	28.964
26100	26067	32.094	1.0589	22769.	3.1120	1364.1	2.7047	5.0436	28.964
26200	26167	32.093	1.0552	22751.	3.1009	1363.6	2.6939	5.0616	28.964
26300	26267	32.093	1.0514	22732.	3.0899	1363.0	2.6832	5.0796	28.964
26400	26367	32.093	1.0477	22713.	3.0789	1362.4	2.6726	5.0978	28.964
26500	26466	32.092	1.0439	22694.	3.0680	1361.9	2.6620	5.1160	28.964
26600	26566	32.092	1.0402	22675.	3.0570	1361.3	2.6514	5.1343	28.964
26700	26666	32.092	1.0365	22657.	3.0461	1360.7	2.6408	5.1526	28.964
26800	26766	32.092	1.0328	22638.	3.0353	1360.1	2.6303	5.1711	28.964
26900	26865	32.091	1.0291	22619.	3.0244	1359.6	2.6198	5.1896	28.964
27000	26965	32.091	1.0254 + 0	22600.	3.0136 +23	1359.0	2.6093 + 9	5.2083 - 7	28.964
27100	27065	32.091	1.0217	22581.	3.0028	1358.4	2.5989	5.2270	28.964
27200	27165	32.090	1.0180	22563.	2.9921	1357.8	2.5885	5.2457	28.964
27300	27264	32.090	1.0144	22544.	2.9813	1357.3	2.5781	5.2646	28.964
27400	27364	32.090	1.0107	22525.	2.9707	1356.7	2.5678	5.2836	28.964
27500	27464	32.089	1.0071	22506.	2.9600	1356.1	2.5575	5.3026	28.964
27600	27564	32.089	1.0035	22487.	2.9494	1355.6	2.5472	5.3217	28.964
27700	27663	32.089	9.9984 - 1	22469.	2.9387	1355.0	2.5370	5.3409	28.964
27800	27763	32.088	9.9624	22450.	2.9282	1354.4	2.5268	5.3602	28.964
27900	27863	32.088	9.9264	22431.	2.9176	1353.8	2.5166	5.3796	28.964
28000	27962	32.088	9.8905 - 1	22412.	2.9071 +23	1353.3	2.5065 + 9	5.3991 - 7	28.964
28100	28062	32.088	9.8547	22393.	2.8966	1352.7	2.4964	5.4186	28.964
28200	28162	32.087	9.8190	22374.	2.8862	1352.1	2.4863	5.4382	28.964
28300	28262	32.087	9.7835	22356.	2.8757	1351.5	2.4763	5.4580	28.964
28400	28361	32.087	9.7480	22337.	2.8653	1351.0	2.4663	5.4778	28.964
28500	28461	32.086	9.7126	22318.	2.8550	1350.4	2.4563	5.4977	28.964
28600	28561	32.086	9.6773	22299.	2.8446	1349.8	2.4463	5.5177	28.964
28700	28661	32.086	9.6421	22280.	2.8343	1349.2	2.4364	5.5378	28.964
28800	28760	32.085	9.6071	22262.	2.8240	1348.7	2.4265	5.5579	28.964
28900	28860	32.085	9.5721	22243.	2.8138	1348.1	2.4167	5.5782	28.964
29000	28960	32.085	9.5372 - 1	22224.	2.8035 +23	1347.5	2.4069 + 9	5.5985 - 7	28.964
29100	29059	32.084	9.5024	22205.	2.7933	1346.9	2.3971	5.6190	28.964
29200	29159	32.084	9.4677	22186.	2.7832	1346.4	2.3873	5.6395	28.964
29300	29259	32.084	9.4331	22168.	2.7730	1345.8	2.3776	5.6602	28.964
29400	29359	32.084	9.3986	22149.	2.7629	1345.2	2.3679	5.6809	28.964
29500	29458	32.083	9.3642	22130.	2.7528	1344.6	2.3583	5.7017	28.964
29600	29558	32.083	9.3299	22111.	2.7427	1344.0	2.3487	5.7226	28.964
29700	29658	32.083	9.2957	22092.	2.7327	1343.5	2.3391	5.7436	28.964
29800	29757	32.082	9.2616	22073.	2.7227	1342.9	2.3295	5.7647	28.964
29900	29857	32.082	9.2276	22055.	2.7127	1342.3	2.3200	5.7859	28.964
30000	29957	32.082	9.1936 - 1	22036.	2.7028 +23	1341.7	2.3105 + 9	5.8072 - 7	28.964
30100	30057	32.081	9.1598	22017.	2.6929	1341.1	2.3010	5.8286	28.964
30200	30156	32.081	9.1261	21998.	2.6830	1340.6	2.2915	5.8501	28.964
30300	30256	32.081	9.0924	21979.	2.6731	1340.0	2.2821	5.8716	28.964
30400	30356	32.080	9.0589	21961.	2.6633	1339.4	2.2727	5.8933	28.964
30500	30455	32.080	9.0255	21942.	2.6535	1338.8	2.2634	5.9151	28.964
30600	30555	32.080	8.9921	21923.	2.6437	1338.2	2.2541	5.9370	28.964
30700	30655	32.080	8.9589	21904.	2.6340	1337.7	2.2448	5.9590	28.964
30800	30755	32.079	8.9257	21885.	2.6242	1337.1	2.2355	5.9810	28.964
30900	30854	32.079	8.8927	21866.	2.6145	1336.5	2.2263	6.0032	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $V$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
31000	31046	32.078	8.8445 - 1	21839.	2.6004 +23	1335.7	2.2129 + 9	6.0358 - 7	28.964
31100	31146	32.078	8.8116	21820.	2.5908	1335.1	2.2037	6.0583	28.964
31200	31247	32.078	8.7787	21801.	2.5811	1334.5	2.1945	6.0809	28.964
31300	31347	32.078	8.7460	21782.	2.5715	1333.9	2.1854	6.1036	28.964
31400	31447	32.077	8.7133	21763.	2.5620	1333.3	2.1763	6.1264	28.964
31500	31548	32.077	8.6808	21745.	2.5524	1332.7	2.1673	6.1494	28.964
31600	31648	32.077	8.6483	21726.	2.5429	1332.1	2.1582	6.1724	28.964
31700	31748	32.076	8.6160	21707.	2.5334	1331.6	2.1492	6.1955	28.964
31800	31849	32.076	8.5837	21688.	2.5239	1331.0	2.1403	6.2187	28.964
31900	31949	32.076	8.5515	21669.	2.5145	1330.4	2.1313	6.2421	28.964
32000	32049	32.075	8.5194 - 1	21650.	2.5051 +23	1329.8	2.1224 + 9	6.2655 - 7	28.964
32100	32149	32.075	8.4874	21631.	2.4957	1329.2	2.1135	6.2891	28.964
32200	32250	32.075	8.4555	21612.	2.4863	1328.6	2.1047	6.3128	28.964
32300	32350	32.074	8.4237	21594.	2.4770	1328.0	2.0958	6.3365	28.964
32400	32450	32.074	8.3920	21575.	2.4677	1327.5	2.0871	6.3604	28.964
32500	32551	32.074	8.3604	21556.	2.4584	1326.9	2.0783	6.3844	28.964
32600	32651	32.074	8.3288	21537.	2.4492	1326.3	2.0696	6.4085	28.964
32700	32751	32.073	8.2974	21518.	2.4399	1325.7	2.0608	6.4328	28.964
32800	32852	32.073	8.2660	21499.	2.4308	1325.1	2.0522	6.4571	28.964
32900	32952	32.073	8.2347	21480.	2.4216	1324.5	2.0435	6.4816	28.964
33000	33052	32.072	8.2036 - 1	21461.	2.4124 +23	1323.9	2.0349 + 9	6.5061 - 7	28.964
33100	33153	32.072	8.1725	21443.	2.4033	1323.3	2.0263	6.5308	28.964
33200	33253	32.072	8.1415	21424.	2.3942	1322.8	2.0177	6.5556	28.964
33300	33353	32.071	8.1106	21405.	2.3852	1322.2	2.0092	6.5805	28.964
33400	33454	32.071	8.0798	21386.	2.3761	1321.6	2.0007	6.6056	28.964
33500	33554	32.071	8.0491	21367.	2.3671	1321.0	1.9922	6.6307	28.964
33600	33654	32.070	8.0184	21348.	2.3581	1320.4	1.9838	6.6560	28.964
33700	33755	32.070	7.9879	21329.	2.3492	1319.8	1.9753	6.6814	28.964
33800	33855	32.070	7.9574	21310.	2.3402	1319.2	1.9670	6.7069	28.964
33900	33955	32.070	7.9271	21292.	2.3313	1318.6	1.9586	6.7325	28.964
34000	34056	32.069	7.8968 - 1	21273.	2.3224 +23	1318.0	1.9503 + 9	6.7583 - 7	28.964
34100	34156	32.069	7.8666	21254.	2.3136	1317.4	1.9419	6.7841	28.964
34200	34256	32.069	7.8365	21235.	2.3048	1316.8	1.9337	6.8101	28.964
34300	34357	32.068	7.8065	21216.	2.2960	1316.3	1.9254	6.8362	28.964
34400	34457	32.068	7.7766	21197.	2.2872	1315.7	1.9172	6.8625	28.964
34500	34557	32.068	7.7467	21178.	2.2784	1315.1	1.9090	6.8888	28.964
34600	34658	32.067	7.7170	21159.	2.2697	1314.5	1.9008	6.9153	28.964
34700	34758	32.067	7.6873	21140.	2.2610	1313.9	1.8927	6.9419	28.964
34800	34858	32.067	7.6577	21122.	2.2523	1313.3	1.8846	6.9687	28.964
34900	34959	32.066	7.6283	21103.	2.2437	1312.7	1.8765	6.9956	28.964
35000	35059	32.066	7.5989 - 1	21084.	2.2350 +23	1312.1	1.8684 + 9	7.0225 - 7	28.964
35200	35260	32.066	7.5403	21046.	2.2179	1310.9	1.8524	7.0769	28.964
35400	35460	32.065	7.4821	21008.	2.2008	1309.7	1.8364	7.1318	28.964
35600	35661	32.064	7.4243	20970.	2.1838	1308.5	1.8206	7.1873	28.964
35800	35862	32.064	7.3668	20933.	2.1669	1307.3	1.8049	7.2432	28.964
36000	36062	32.063	7.3096	20895.	2.1502	1306.1	1.7893	7.2997	28.964
36200	36263	32.062	7.2455	20878.	2.1313	1305.6	1.7729	7.3642	28.964
36400	36464	32.062	7.1760	20879.	2.1110	1305.6	1.7560	7.4353	28.964
36600	36664	32.061	7.1072	20879.	2.0908	1305.6	1.7392	7.5072	28.964
36800	36865	32.061	7.0391	20879.	2.0708	1305.6	1.7225	7.5797	28.964
37000	37066	32.060	6.9716 - 1	20880.	2.0509 +23	1305.6	1.7060 + 9	7.6529 - 7	28.964
37200	37266	32.059	6.9048	20880.	2.0313	1305.6	1.6897	7.7268	28.964
37400	37467	32.059	6.8386	20881.	2.0119	1305.6	1.6736	7.8014	28.964
37600	37668	32.058	6.7731	20881.	1.9926	1305.6	1.6575	7.8768	28.964
37800	37869	32.058	6.7081	20881.	1.9736	1305.6	1.6417	7.9529	28.964
38000	38069	32.057	6.6438	20882.	1.9547	1305.6	1.6260	8.0297	28.964
38200	38270	32.056	6.5801	20882.	1.9360	1305.6	1.6104	8.1073	28.964
38400	38471	32.056	6.5171	20883.	1.9175	1305.6	1.5950	8.1856	28.964
38600	38672	32.055	6.4546	20883.	1.8991	1305.6	1.5798	8.2646	28.964
38800	38872	32.054	6.3927	20883.	1.8810	1305.6	1.5647	8.3445	28.964
39000	39073	32.054	6.3315 - 1	20884.	1.8630 +23	1305.6	1.5497 + 9	8.4251 - 7	28.964
39200	39274	32.053	6.2708	20884.	1.8452	1305.6	1.5349	8.5064	28.964
39400	39475	32.053	6.2107	20885.	1.8275	1305.6	1.5202	8.5886	28.964
39600	39675	32.052	6.1511	20885.	1.8100	1305.6	1.5056	8.6716	28.964
39800	39876	32.051	6.0922	20885.	1.7927	1305.6	1.4912	8.7553	28.964
40000	40077	32.051	6.0338	20886.	1.7756	1305.6	1.4770	8.8399	28.964
40200	40278	32.050	5.9759	20886.	1.7586	1305.6	1.4628	8.9253	28.964
40400	40478	32.050	5.9186	20887.	1.7417	1305.6	1.4488	9.0115	28.964
40600	40679	32.049	5.8619	20887.	1.7251	1305.6	1.4350	9.0985	28.964
40800	40880	32.048	5.8057	20887.	1.7086	1305.6	1.4212	9.1864	28.964
41000	41081	32.048	5.7501 - 1	20888.	1.6922 +23	1305.6	1.4077 + 9	9.2751 - 7	28.964
41200	41282	32.047	5.6949	20888.	1.6760	1305.6	1.3942	9.3647	28.964
41400	41482	32.046	5.6404	20889.	1.6600	1305.6	1.3808	9.4552	28.964
41600	41683	32.046	5.5863	20889.	1.6441	1305.6	1.3676	9.5465	28.964
41800	41884	32.045	5.5327	20889.	1.6284	1305.6	1.3546	9.6387	28.964
42000	42085	32.045	5.4797	20890.	1.6128	1305.6	1.3416	9.7318	28.964
42200	42286	32.044	5.4272	20890.	1.5974	1305.6	1.3288	9.8258	28.964
42400	42486	32.043	5.3752	20891.	1.5821	1305.6	1.3160	9.9207	28.964
42600	42687	32.043	5.3236	20891.	1.5670	1305.6	1.3035	1.0017 - 6	28.964
42800	42888	32.042	5.2726	20891.	1.5520	1305.6	1.2910	1.0113	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $V$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
31000	30954	32.079	8.8597 - 1	21848.	2.6049 +23	1335.9	2.2171 + 9	6.0255 - 7	28.964
31100	31054	32.078	8.8268	21829.	2.5952	1335.3	2.2079	6.0479	28.964
31200	31153	32.078	8.7940	21810.	2.5856	1334.8	2.1988	6.0704	28.964
31300	31253	32.078	8.7613	21791.	2.5760	1334.2	2.1897	6.0930	28.964
31400	31353	32.077	8.7288	21772.	2.5665	1333.6	2.1806	6.1157	28.964
31500	31452	32.077	8.6962	21754.	2.5569	1333.0	2.1716	6.1385	28.964
31600	31552	32.077	8.6638	21735.	2.5474	1332.4	2.1626	6.1614	28.964
31700	31652	32.076	8.6315	21716.	2.5380	1331.8	2.1536	6.1844	28.964
31800	31752	32.076	8.5993	21697.	2.5285	1331.3	2.1446	6.2075	28.964
31900	31851	32.076	8.5672	21678.	2.5191	1330.7	2.1357	6.2307	28.964
32000	31951	32.076	8.5351 - 1	21660.	2.5097 +23	1330.1	2.1268 + 9	6.2540 - 7	28.964
32100	32051	32.075	8.5032	21641.	2.5003	1329.5	2.1179	6.2775	28.964
32200	32150	32.075	8.4713	21622.	2.4910	1328.9	2.1091	6.3010	28.964
32300	32250	32.075	8.4396	21603.	2.4817	1328.3	2.1003	6.3246	28.964
32400	32350	32.074	8.4079	21584.	2.4724	1327.8	2.0915	6.3484	28.964
32500	32449	32.074	8.3763	21565.	2.4631	1327.2	2.0827	6.3723	28.964
32600	32549	32.074	8.3449	21547.	2.4539	1326.6	2.0740	6.3963	28.964
32700	32649	32.073	8.3135	21528.	2.4447	1326.0	2.0653	6.4204	28.964
32800	32748	32.073	8.2822	21509.	2.4355	1325.4	2.0566	6.4446	28.964
32900	32848	32.073	8.2509	21490.	2.4263	1324.8	2.0480	6.4689	28.964
33000	32948	32.072	8.2198 - 1	21471.	2.4172 +23	1324.2	2.0394 + 9	6.4933 - 7	28.964
33100	33048	32.072	8.1888	21452.	2.4081	1323.6	2.0308	6.5179	28.964
33200	33147	32.072	8.1578	21434.	2.3990	1323.1	2.0223	6.5425	28.964
33300	33247	32.072	8.1270	21415.	2.3900	1322.5	2.0137	6.5673	28.964
33400	33347	32.071	8.0962	21396.	2.3809	1321.9	2.0052	6.5922	28.964
33500	33446	32.071	8.0656	21377.	2.3720	1321.3	1.9968	6.6172	28.964
33600	33546	32.071	8.0350	21358.	2.3630	1320.7	1.9883	6.6423	28.964
33700	33646	32.070	8.0045	21340.	2.3540	1320.1	1.9799	6.6676	28.964
33800	33745	32.070	7.9741	21321.	2.3451	1319.5	1.9715	6.6929	28.964
33900	33845	32.070	7.9438	21302.	2.3362	1318.9	1.9632	6.7184	28.964
34000	33945	32.069	7.9135 - 1	21283.	2.3274 +23	1318.4	1.9549 + 9	6.7440 - 7	28.964
34100	34044	32.069	7.8834	21264.	2.3185	1317.8	1.9466	6.7697	28.964
34200	34144	32.069	7.8533	21245.	2.3097	1317.2	1.9383	6.7955	28.964
34300	34244	32.068	7.8234	21227.	2.3009	1316.6	1.9301	6.8215	28.964
34400	34343	32.068	7.7935	21208.	2.2921	1316.0	1.9218	6.8476	28.964
34500	34443	32.068	7.7637	21189.	2.2834	1315.4	1.9137	6.8738	28.964
34600	34543	32.068	7.7340	21170.	2.2747	1314.8	1.9055	6.9001	28.964
34700	34642	32.067	7.7044	21151.	2.2660	1314.2	1.8974	6.9266	28.964
34800	34742	32.067	7.6749	21133.	2.2573	1313.6	1.8893	6.9532	28.964
34900	34842	32.067	7.6454	21114.	2.2487	1313.0	1.8812	6.9799	28.964
35000	34941	32.066	7.6161 - 1	21095.	2.2401 +23	1312.5	1.8731 + 9	7.0067 - 7	28.964
35200	35141	32.066	7.5576	21057.	2.2229	1311.3	1.8571	7.0607	28.964
35400	35340	32.065	7.4995	21020.	2.2059	1310.1	1.8412	7.1153	28.964
35600	35539	32.064	7.4418	20982.	2.1890	1308.9	1.8254	7.1704	28.964
35800	35739	32.064	7.3844	20944.	2.1721	1307.7	1.8097	7.2260	28.964
36000	35938	32.063	7.3273	20907.	2.1554	1306.5	1.7941	7.2821	28.964
36200	36137	32.063	7.2674	20878.	2.1378	1305.6	1.7783	7.3420	28.964
36400	36337	32.062	7.1980	20879.	2.1174	1305.6	1.7613	7.4127	28.964
36600	36536	32.061	7.1292	20879.	2.0972	1305.6	1.7445	7.4841	28.964
36800	36735	32.061	7.0611	20879.	2.0772	1305.6	1.7279	7.5561	28.964
37000	36934	32.060	6.9937 - 1	20880.	2.0574 +23	1305.6	1.7114 + 9	7.6288 - 7	28.964
37200	37134	32.060	6.9269	20880.	2.0378	1305.6	1.6951	7.7022	28.964
37400	37333	32.059	6.8607	20881.	2.0184	1305.6	1.6790	7.7764	28.964
37600	37532	32.058	6.7952	20881.	1.9991	1305.6	1.6629	7.8512	28.964
37800	37732	32.058	6.7303	20881.	1.9801	1305.6	1.6471	7.9268	28.964
38000	37931	32.057	6.6660	20882.	1.9612	1305.6	1.6314	8.0031	28.964
38200	38130	32.056	6.6023	20882.	1.9425	1305.6	1.6158	8.0801	28.964
38400	38329	32.056	6.5393	20883.	1.9240	1305.6	1.6004	8.1578	28.964
38600	38529	32.055	6.4768	20883.	1.9057	1305.6	1.5852	8.2363	28.964
38800	38728	32.055	6.4150	20883.	1.8875	1305.6	1.5701	8.3156	28.964
39000	38927	32.054	6.3537 - 1	20884.	1.8695 +23	1305.6	1.5551 + 9	8.3956 - 7	28.964
39200	39126	32.053	6.2930	20884.	1.8517	1305.6	1.5403	8.4764	28.964
39400	39326	32.053	6.2329	20885.	1.8340	1305.6	1.5256	8.5580	28.964
39600	39525	32.052	6.1734	20885.	1.8166	1305.6	1.5111	8.6403	28.964
39800	39724	32.052	6.1144	20885.	1.7992	1305.6	1.4967	8.7235	28.964
40000	39923	32.051	6.0561	20886.	1.7821	1305.6	1.4824	8.8074	28.964
40200	40123	32.050	5.9982	20886.	1.7651	1305.6	1.4683	8.8921	28.964
40400	40322	32.050	5.9409	20887.	1.7483	1305.6	1.4543	8.9777	28.964
40600	40521	32.049	5.8842	20887.	1.7316	1305.6	1.4404	9.0641	28.964
40800	40720	32.049	5.8280	20887.	1.7151	1305.6	1.4267	9.1513	28.964
41000	40920	32.048	5.7724 - 1	20888.	1.6988 +23	1305.6	1.4131 + 9	9.2393 - 7	28.964
41200	41119	32.047	5.7173	20888.	1.6826	1305.6	1.3996	9.3282	28.964
41400	41318	32.047	5.6627	20889.	1.6666	1305.6	1.3863	9.4180	28.964
41600	41517	32.046	5.6086	20889.	1.6507	1305.6	1.3731	9.5086	28.964
41800	41716	32.045	5.5551	20889.	1.6350	1305.6	1.3600	9.6001	28.964
42000	41916	32.045	5.5020	20890.	1.6194	1305.6	1.3471	9.6924	28.964
42200	42115	32.044	5.4495	20890.	1.6039	1305.6	1.3342	9.7856	28.964
42400	42314	32.044	5.3975	20891.	1.5887	1305.6	1.3215	9.8798	28.964
42600	42513	32.043	5.3459	20891.	1.5735	1305.6	1.3089	9.9748	28.964
42800	42712	32.042	5.2949	20891.	1.5585	1305.6	1.2964	1.0071 - 6	28.964



## GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g, \text{ft sec}^{-2}$	Specific weight $\omega, \text{lb ft}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{ft}$	Number density $n, \text{ft}^{-3}$	Particle speed $\bar{V}, \text{ft sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{ft}$	Molecular weight $M$
H, ft	Z, ft								
43000	43089	32.041	5.2221 - 1	20892.	1.5371 +23	1305.6	1.2786 + 9	1.0211 - 6	28.964
43200	43290	32.041	5.1720	20892.	1.5224	1305.6	1.2664	1.0310	28.964
43400	43491	32.040	5.1224	20893.	1.5079	1305.6	1.2543	1.0409	28.964
43600	43691	32.040	5.0733	20893.	1.4934	1305.6	1.2423	1.0510	28.964
43800	43892	32.039	5.0247	20893.	1.4792	1305.6	1.2304	1.0611	28.964
44000	44093	32.038	4.9765	20894.	1.4650	1305.6	1.2186	1.0714	28.964
44200	44294	32.038	4.9288	20894.	1.4510	1305.6	1.2070	1.0817	28.964
44400	44495	32.037	4.8816	20895.	1.4371	1305.6	1.1954	1.0922	28.964
44600	44696	32.037	4.8348	20895.	1.4234	1305.6	1.1840	1.1027	28.964
44800	44896	32.036	4.7884	20896.	1.4097	1305.6	1.1727	1.1134	28.964
45000	45097	32.035	4.7425 - 1	20896.	1.3963 +23	1305.6	1.1615 + 9	1.1241 - 6	28.964
45200	45298	32.035	4.6971	20896.	1.3829	1305.6	1.1503	1.1350	28.964
45400	45499	32.034	4.6521	20897.	1.3697	1305.6	1.1393	1.1459	28.964
45600	45700	32.033	4.6075	20897.	1.3566	1305.6	1.1284	1.1570	28.964
45800	45901	32.033	4.5633	20898.	1.3436	1305.6	1.1176	1.1682	28.964
46000	46102	32.032	4.5196	20898.	1.3307	1305.6	1.1069	1.1795	28.964
46200	46303	32.032	4.4762	20898.	1.3180	1305.6	1.0964	1.1909	28.964
46400	46503	32.031	4.4333	20899.	1.3054	1305.6	1.0859	1.2024	28.964
46600	46704	32.030	4.3908	20899.	1.2929	1305.6	1.0755	1.2140	28.964
46800	46905	32.030	4.3487	20900.	1.2805	1305.6	1.0652	1.2257	28.964
47000	47106	32.029	4.3070 - 1	20900.	1.2683 +23	1305.6	1.0550 + 9	1.2375 - 6	28.964
47200	47307	32.029	4.2658	20900.	1.2562	1305.6	1.0449	1.2495	28.964
47400	47508	32.028	4.2249	20901.	1.2441	1305.6	1.0349	1.2616	28.964
47600	47709	32.027	4.1844	20901.	1.2322	1305.6	1.0250	1.2738	28.964
47800	47910	32.027	4.1443	20902.	1.2204	1305.6	1.0152	1.2861	28.964
48000	48111	32.026	4.1045	20902.	1.2088	1305.6	1.0055	1.2985	28.964
48200	48312	32.025	4.0652	20902.	1.1972	1305.6	9.9587 + 8	1.3110	28.964
48400	48513	32.025	4.0262	20903.	1.1858	1305.6	9.8635	1.3237	28.964
48600	48714	32.024	3.9876	20903.	1.1744	1305.6	9.7691	1.3365	28.964
48800	48914	32.024	3.9494	20904.	1.1632	1305.6	9.6757	1.3494	28.964
49000	49115	32.023	3.9116 - 1	20904.	1.1520 +23	1305.6	9.5831 + 8	1.3624 - 6	28.964
49200	49316	32.022	3.8741	20904.	1.1410	1305.6	9.4914	1.3756	28.964
49400	49517	32.022	3.8369	20905.	1.1301	1305.6	9.4006	1.3889	28.964
49600	49718	32.021	3.8001	20905.	1.1193	1305.6	9.3107	1.4023	28.964
49800	49919	32.021	3.7637	20906.	1.1086	1305.6	9.2216	1.4158	28.964
50000	50120	32.020	3.7276	20906.	1.0980	1305.6	9.1334	1.4295	28.964
50200	50321	32.019	3.6919	20906.	1.0875	1305.6	9.0460	1.4433	28.964
50400	50522	32.019	3.6565	20907.	1.0771	1305.6	8.9595	1.4572	28.964
50600	50723	32.018	3.6215	20907.	1.0668	1305.6	8.8738	1.4713	28.964
50800	50924	32.017	3.5868	20908.	1.0566	1305.6	8.7889	1.4855	28.964
51000	51125	32.017	3.5524 - 1	20908.	1.0465 +23	1305.6	8.7048 + 8	1.4999 - 6	28.964
51200	51326	32.016	3.5183	20908.	1.0364	1305.6	8.6215	1.5144	28.964
51400	51527	32.016	3.4846	20909.	1.0265	1305.6	8.5390	1.5290	28.964
51600	51728	32.015	3.4512	20909.	1.0167	1305.6	8.4573	1.5438	28.964
51800	51929	32.014	3.4181	20910.	1.0070	1305.6	8.3764	1.5587	28.964
52000	52130	32.014	3.3853	20910.	9.9735 +22	1305.6	8.2963	1.5737	28.964
52200	52331	32.013	3.3529	20910.	9.8781	1305.6	8.2169	1.5889	28.964
52400	52532	32.013	3.3208	20911.	9.7836	1305.6	8.1383	1.6043	28.964
52600	52733	32.012	3.2889	20911.	9.6900	1305.6	8.0605	1.6198	28.964
52800	52934	32.011	3.2574	20912.	9.5973	1305.6	7.9834	1.6354	28.964
53000	53135	32.011	3.2262 - 1	20912.	9.5055 +22	1305.6	7.9070 + 8	1.6512 - 6	28.964
53200	53336	32.010	3.1952	20912.	9.4146	1305.6	7.8313	1.6672	28.964
53400	53537	32.009	3.1646	20913.	9.3245	1305.6	7.7564	1.6833	28.964
53600	53738	32.009	3.1343	20913.	9.2353	1305.6	7.6822	1.6995	28.964
53800	53939	32.008	3.1042	20914.	9.1469	1305.6	7.6087	1.7159	28.964
54000	54140	32.008	3.0745	20914.	9.0594	1305.6	7.5359	1.7325	28.964
54200	54341	32.007	3.0450	20914.	8.9728	1305.6	7.4638	1.7493	28.964
54400	54542	32.006	3.0158	20915.	8.8869	1305.6	7.3924	1.7662	28.964
54600	54743	32.006	2.9869	20915.	8.8019	1305.6	7.3217	1.7832	28.964
54800	54944	32.005	2.9583	20916.	8.7177	1305.6	7.2517	1.8004	28.964
55000	55145	32.005	2.9299 - 1	20916.	8.6343 +22	1305.6	7.1823 + 8	1.8178 - 6	28.964
55200	55347	32.004	2.9018	20916.	8.5517	1305.6	7.1136	1.8354	28.964
55400	55548	32.003	2.8740	20917.	8.4699	1305.6	7.0455	1.8531	28.964
55600	55749	32.003	2.8465	20917.	8.3889	1305.6	6.9781	1.8710	28.964
55800	55950	32.002	2.8192	20918.	8.3086	1305.6	6.9114	1.8891	28.964
56000	56151	32.001	2.7922	20918.	8.2291	1305.6	6.8453	1.9073	28.964
56200	56352	32.001	2.7654	20918.	8.1504	1305.6	6.7798	1.9258	28.964
56400	56553	32.000	2.7389	20919.	8.0724	1305.6	6.7149	1.9444	28.964
56600	56754	32.000	2.7126	20919.	7.9952	1305.6	6.6507	1.9631	28.964
56800	56955	31.999	2.6866	20920.	7.9187	1305.6	6.5870	1.9821	28.964
57000	57156	31.998	2.6609 - 1	20920.	7.8430 +22	1305.6	6.5240 + 8	2.0012 - 6	28.964
57200	57357	31.998	2.6354	20920.	7.7679	1305.6	6.4616	2.0206	28.964
57400	57558	31.997	2.6101	20921.	7.6936	1305.6	6.3998	2.0401	28.964
57600	57760	31.997	2.5851	20921.	7.6200	1305.6	6.3386	2.0598	28.964
57800	57961	31.996	2.5603	20922.	7.5471	1305.6	6.2779	2.0797	28.964
58000	58162	31.995	2.5358	20922.	7.4749	1305.6	6.2179	2.0998	28.964
58200	58363	31.995	2.5115	20922.	7.4034	1305.6	6.1584	2.1201	28.964
58400	58564	31.994	2.4874	20923.	7.3326	1305.6	6.0995	2.1405	28.964
58600	58765	31.993	2.4635	20923.	7.2624	1305.6	6.0411	2.1612	28.964
58800	58966	31.993	2.4399	20924.	7.1930	1305.6	5.9833	2.1821	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g, \text{ft sec}^{-2}$	Specific weight $\omega, \text{lb ft}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{ft}$	Number density $n, \text{ft}^{-3}$	Particle speed $\bar{V}, \text{ft sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{ft}$	Molecular weight $M$
Z, ft	H, ft								
43000	42912	32.042	5.2444 - 1	20892.	1.5437 +23	1305.6	1.2841 + 9	1.0168 - 6	28.964
43200	43111	32.041	5.1943	20892.	1.5290	1305.6	1.2719	1.0265	28.964
43400	43310	32.041	5.1447	20893.	1.5144	1305.6	1.2597	1.0364	28.964
43600	43509	32.040	5.0956	20893.	1.5000	1305.6	1.2477	1.0464	28.964
43800	43708	32.039	5.0470	20893.	1.4857	1305.6	1.2358	1.0565	28.964
44000	43907	32.039	4.9988	20894.	1.4715	1305.6	1.2241	1.0666	28.964
44200	44107	32.038	4.9511	20894.	1.4575	1305.6	1.2124	1.0769	28.964
44400	44306	32.037	4.9038	20895.	1.4436	1305.6	1.2009	1.0872	28.964
44600	44505	32.037	4.8570	20895.	1.4299	1305.6	1.1894	1.0977	28.964
44800	44704	32.036	4.8106	20895.	1.4163	1305.6	1.1781	1.1082	28.964
45000	44903	32.036	4.7647 - 1	20896.	1.4028 +23	1305.6	1.1669 + 9	1.1189 - 6	28.964
45200	45102	32.035	4.7192	20896.	1.3894	1305.6	1.1558	1.1297	28.964
45400	45301	32.034	4.6742	20897.	1.3762	1305.6	1.1447	1.1405	28.964
45600	45501	32.034	4.6296	20897.	1.3631	1305.6	1.1338	1.1515	28.964
45800	45700	32.033	4.5854	20897.	1.3501	1305.6	1.1230	1.1626	28.964
46000	45899	32.033	4.5416	20898.	1.3372	1305.6	1.1123	1.1737	28.964
46200	46098	32.032	4.4983	20898.	1.3245	1305.6	1.1018	1.1850	28.964
46400	46297	32.031	4.4554	20899.	1.3119	1305.6	1.0913	1.1964	28.964
46600	46496	32.031	4.4129	20899.	1.2994	1305.6	1.0809	1.2079	28.964
46800	46695	32.030	4.3707	20899.	1.2870	1305.6	1.0706	1.2196	28.964
47000	46894	32.030	4.3290 - 1	20900.	1.2747 +23	1305.6	1.0604 + 9	1.2313 - 6	28.964
47200	47093	32.029	4.2877	20900.	1.2626	1305.6	1.0503	1.2431	28.964
47400	47293	32.028	4.2468	20901.	1.2506	1305.6	1.0403	1.2551	28.964
47600	47492	32.028	4.2063	20901.	1.2387	1305.6	1.0304	1.2671	28.964
47800	47691	32.027	4.1661	20901.	1.2269	1305.6	1.0206	1.2793	28.964
48000	47890	32.026	4.1264	20902.	1.2152	1305.6	1.0108	1.2916	28.964
48200	48089	32.026	4.0870	20902.	1.2036	1305.6	1.0012	1.3040	28.964
48400	48288	32.025	4.0480	20903.	1.1922	1305.6	9.9168 + 8	1.3166	28.964
48600	48487	32.025	4.0094	20903.	1.1808	1305.6	9.8223	1.3292	28.964
48800	48686	32.024	3.9711	20903.	1.1696	1305.6	9.7288	1.3420	28.964
49000	48885	32.023	3.9332 - 1	20904.	1.1584 +23	1305.6	9.6361 + 8	1.3549 - 6	28.964
49200	49084	32.023	3.8957	20904.	1.1474	1305.6	9.5444	1.3679	28.964
49400	49283	32.022	3.8586	20905.	1.1365	1305.6	9.4535	1.3811	28.964
49600	49482	32.022	3.8217	20905.	1.1256	1305.6	9.3635	1.3944	28.964
49800	49681	32.021	3.7853	20905.	1.1149	1305.6	9.2743	1.4078	28.964
50000	49880	32.020	3.7492	20906.	1.1043	1305.6	9.1860	1.4213	28.964
50200	50079	32.020	3.7134	20906.	1.0938	1305.6	9.0986	1.4350	28.964
50400	50278	32.019	3.6780	20907.	1.0834	1305.6	9.0120	1.4488	28.964
50600	50478	32.018	3.6429	20907.	1.0731	1305.6	8.9262	1.4627	28.964
50800	50677	32.018	3.6081	20907.	1.0629	1305.6	8.8412	1.4767	28.964
51000	50876	32.017	3.5737 - 1	20908.	1.0527 +23	1305.6	8.7570 + 8	1.4909 - 6	28.964
51200	51075	32.017	3.5396	20908.	1.0427	1305.6	8.6736	1.5053	28.964
51400	51274	32.016	3.5059	20909.	1.0328	1305.6	8.5911	1.5197	28.964
51600	51473	32.015	3.4724	20909.	1.0230	1305.6	8.5093	1.5343	28.964
51800	51672	32.015	3.4393	20909.	1.0132	1305.6	8.4283	1.5491	28.964
52000	51871	32.014	3.4065	20910.	1.0036	1305.6	8.3480	1.5640	28.964
52200	52070	32.014	3.3740	20910.	9.9402 +22	1305.6	8.2686	1.5790	28.964
52400	52269	32.013	3.3418	20911.	9.8456	1305.6	8.1899	1.5942	28.964
52600	52468	32.012	3.3099	20911.	9.7518	1305.6	8.1119	1.6095	28.964
52800	52667	32.012	3.2784	20911.	9.6590	1305.6	8.0347	1.6250	28.964
53000	52866	32.011	3.2471 - 1	20912.	9.5671 +22	1305.6	7.9582 + 8	1.6406 - 6	28.964
53200	53065	32.011	3.2161	20912.	9.4760	1305.6	7.8825	1.6564	28.964
53400	53264	32.010	3.1855	20913.	9.3858	1305.6	7.8074	1.6723	28.964
53600	53463	32.009	3.1551	20913.	9.2965	1305.6	7.7331	1.6883	28.964
53800	53662	32.009	3.1250	20913.	9.2080	1305.6	7.6595	1.7046	28.964
54000	53861	32.008	3.0952	20914.	9.1204	1305.6	7.5866	1.7209	28.964
54200	54059	32.007	3.0657	20914.	9.0336	1305.6	7.5144	1.7375	28.964
54400	54258	32.007	3.0364	20915.	8.9476	1305.6	7.4429	1.7542	28.964
54600	54457	32.006	3.0075	20915.	8.8624	1305.6	7.3721	1.7710	28.964
54800	54656	32.006	2.9788	20915.	8.7781	1305.6	7.3019	1.7880	28.964
55000	54855	32.005	2.9504 - 1	20916.	8.6946 +22	1305.6	7.2324 + 8	1.8052 - 6	28.964
55200	55054	32.004	2.9223	20916.	8.6118	1305.6	7.1636	1.8226	28.964
55400	55253	32.004	2.8944	20917.	8.5299	1305.6	7.0954	1.8401	28.964
55600	55452	32.003	2.8668	20917.	8.4487	1305.6	7.0279	1.8578	28.964
55800	55651	32.003	2.8395	20917.	8.3683	1305.6	6.9610	1.8756	28.964
56000	55850	32.002	2.8124	20918.	8.2887	1305.6	6.8948	1.8936	28.964
56200	56049	32.001	2.7856	20918.	8.2098	1305.6	6.8292	1.9118	28.964
56400	56248	32.001	2.7590	20919.	8.1317	1305.6	6.7642	1.9302	28.964
56600	56447	32.000	2.7327	20919.	8.0543	1305.6	6.6998	1.9487	28.964
56800	56646	31.999	2.7067	20919.	7.9777	1305.6	6.6361	1.9675	28.964
57000	56845	31.999	2.6809 - 1	20920.	7.9018 +22	1305.6	6.5729 + 8	1.9864 - 6	28.964
57200	57044	31.998	2.6553	20920.	7.8266	1305.6	6.5104	2.0054	28.964
57400	57242	31.998	2.6300	20921.	7.7521	1305.6	6.4485	2.0247	28.964
57600	57441	31.997	2.6049	20921.	7.6783	1305.6	6.3871	2.0441	28.964
57800	57640	31.996	2.5801	20921.	7.6053	1305.6	6.3263	2.0638	28.964
58000	57839	31.996	2.5555	20922.	7.5329	1305.6	6.2661	2.0836	28.964
58200	58038	31.995	2.5311	20922.	7.4613	1305.6	6.2065	2.1036	28.964
58400	58237	31.995	2.5070	20923.	7.3903	1305.6	6.1475	2.1238	28.964
58600	58436	31.994	2.4831	20923.	7.3200	1305.6	6.0890	2.1442	28.964
58800	58635	31.993	2.4594	20923.	7.2503	1305.6	6.0311	2.1648	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $V$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
H, ft	Z, ft								
59000	59167	31.992	2.4165 - 1	20924.	7.1241 +22	1305.6	5.9261 + 8	2.2032 - 6	28.964
59200	59369	31.992	2.3934	20924.	7.0560	1305.6	5.8694	2.2244	28.964
59400	59570	31.991	2.3704	20925.	6.9885	1305.6	5.8133	2.2459	28.964
59600	59771	31.990	2.3477	20925.	6.9216	1305.6	5.7576	2.2676	28.964
59800	59972	31.990	2.3252	20926.	6.8554	1305.6	5.7026	2.2895	28.964
60000	60173	31.989	2.3029	20926.	6.7898	1305.6	5.6480	2.3116	28.964
60200	60374	31.989	2.2808	20926.	6.7249	1305.6	5.5940	2.3340	28.964
60400	60575	31.988	2.2590	20927.	6.6605	1305.6	5.5405	2.3565	28.964
60600	60777	31.987	2.2373	20927.	6.5968	1305.6	5.4875	2.3793	28.964
60800	60978	31.987	2.2159	20928.	6.5337	1305.6	5.4350	2.4023	28.964
61000	61179	31.986	2.1946 - 1	20928.	6.4712 +22	1305.6	5.3830 + 8	2.4255 - 6	28.964
61200	61380	31.985	2.1736	20928.	6.4093	1305.6	5.3315	2.4489	28.964
61400	61581	31.985	2.1528	20929.	6.3480	1305.6	5.2805	2.4725	28.964
61600	61783	31.984	2.1321	20929.	6.2873	1305.6	5.2299	2.4964	28.964
61800	61984	31.984	2.1117	20930.	6.2271	1305.6	5.1799	2.5205	28.964
62000	62185	31.983	2.0915	20930.	6.1675	1305.6	5.1304	2.5449	28.964
62200	62386	31.982	2.0714	20930.	6.1085	1305.6	5.0813	2.5695	28.964
62400	62587	31.982	2.0515	20931.	6.0501	1305.6	5.0327	2.5943	28.964
62600	62788	31.981	2.0319	20931.	5.9922	1305.6	4.9845	2.6193	28.964
62800	62990	31.981	2.0124	20932.	5.9349	1305.6	4.9368	2.6446	28.964
63000	63191	31.980	1.9931 - 1	20932.	5.8781 +22	1305.6	4.8896 + 8	2.6702 - 6	28.964
63200	63392	31.979	1.9740	20933.	5.8219	1305.6	4.8428	2.6960	28.964
63400	63593	31.979	1.9551	20933.	5.7662	1305.6	4.7965	2.7220	28.964
63600	63795	31.978	1.9363	20933.	5.7110	1305.6	4.7506	2.7483	28.964
63800	63996	31.977	1.9178	20934.	5.6564	1305.6	4.7052	2.7749	28.964
64000	64197	31.977	1.8994	20934.	5.6023	1305.6	4.6602	2.8017	28.964
64200	64398	31.976	1.8812	20935.	5.5487	1305.6	4.6156	2.8287	28.964
64400	64600	31.976	1.8632	20935.	5.4956	1305.6	4.5714	2.8560	28.964
64600	64801	31.975	1.8453	20935.	5.4430	1305.6	4.5277	2.8836	28.964
64800	65002	31.974	1.8276	20936.	5.3909	1305.6	4.4844	2.9115	28.964
65000	65203	31.974	1.8101 - 1	20936.	5.3394 +22	1305.6	4.4415 + 8	2.9396 - 6	28.964
65200	65404	31.973	1.7927	20937.	5.2883	1305.6	4.3990	2.9680	28.964
65400	65606	31.973	1.7756	20937.	5.2377	1305.6	4.3569	2.9967	28.964
65600	65807	31.972	1.7585	20937.	5.1876	1305.6	4.3152	3.0256	28.964
65800	66008	31.971	1.7412	20943.	5.1366	1305.8	4.2734	3.0556	28.964
66000	66210	31.971	1.7241	20949.	5.0861	1306.0	4.2319	3.0860	28.964
66200	66411	31.970	1.7071	20956.	5.0361	1306.2	4.1909	3.1167	28.964
66400	66612	31.969	1.6902	20962.	4.9865	1306.3	4.1502	3.1476	28.964
66600	66813	31.969	1.6736	20968.	4.9375	1306.5	4.1100	3.1789	28.964
66800	67015	31.968	1.6571	20975.	4.8890	1306.7	4.0702	3.2104	28.964
67000	67216	31.968	1.6408 - 1	20981.	4.8409 +22	1306.9	4.0307 + 8	3.2423 - 6	28.964
67200	67417	31.967	1.6246	20987.	4.7933	1307.1	3.9917	3.2745	28.964
67400	67619	31.966	1.6087	20994.	4.7463	1307.3	3.9530	3.3069	28.964
67600	67820	31.966	1.5928	21000.	4.6997	1307.4	3.9148	3.3397	28.964
67800	68021	31.965	1.5772	21006.	4.6535	1307.6	3.8769	3.3729	28.964
68000	68222	31.965	1.5617	21012.	4.6079	1307.8	3.8394	3.4063	28.964
68200	68424	31.964	1.5463	21019.	4.5626	1308.0	3.8023	3.4400	28.964
68400	68625	31.963	1.5311	21025.	4.5179	1308.2	3.7655	3.4741	28.964
68600	68826	31.963	1.5161	21031.	4.4736	1308.4	3.7291	3.5085	28.964
68800	69028	31.962	1.5012	21038.	4.4297	1308.5	3.6930	3.5432	28.964
69000	69229	31.961	1.4864 - 1	21044.	4.3863 +22	1308.7	3.6574 + 8	3.5783 - 6	28.964
69200	69430	31.961	1.4718	21050.	4.3434	1308.9	3.6220	3.6137	28.964
69400	69632	31.960	1.4574	21056.	4.3008	1309.1	3.5871	3.6495	28.964
69600	69833	31.960	1.4431	21063.	4.2587	1309.3	3.5524	3.6856	28.964
69800	70034	31.959	1.4289	21069.	4.2170	1309.5	3.5182	3.7220	28.964
70000	70236	31.958	1.4149	21075.	4.1757	1309.6	3.4842	3.7588	28.964
70200	70437	31.958	1.4011	21082.	4.1349	1309.8	3.4506	3.7959	28.964
70400	70638	31.957	1.3873	21088.	4.0944	1310.0	3.4173	3.8334	28.964
70600	70840	31.957	1.3737	21094.	4.0544	1310.2	3.3844	3.8713	28.964
70800	71041	31.956	1.3603	21101.	4.0148	1310.4	3.3518	3.9095	28.964
71000	71243	31.955	1.3470 - 1	21107.	3.9755 +22	1310.6	3.3195 + 8	3.9481 - 6	28.964
71200	71444	31.955	1.3338	21113.	3.9367	1310.7	3.2875	3.9870	28.964
71400	71645	31.954	1.3207	21119.	3.8982	1310.9	3.2558	4.0263	28.964
71600	71847	31.953	1.3078	21126.	3.8602	1311.1	3.2245	4.0661	28.964
71800	72048	31.953	1.2950	21132.	3.8225	1311.3	3.1935	4.1061	28.964
72000	72249	31.952	1.2823	21138.	3.7852	1311.5	3.1627	4.1466	28.964
72200	72451	31.952	1.2698	21145.	3.7482	1311.6	3.1323	4.1875	28.964
72400	72652	31.951	1.2574	21151.	3.7117	1311.8	3.1022	4.2287	28.964
72600	72854	31.950	1.2451	21157.	3.6755	1312.0	3.0724	4.2703	28.964
72800	73055	31.950	1.2330	21164.	3.6397	1312.2	3.0429	4.3124	28.964
73000	73256	31.949	1.2209 - 1	21170.	3.6042 +22	1312.4	3.0136 + 8	4.3548 - 6	28.964
73200	73458	31.949	1.2090	21176.	3.5691	1312.6	2.9847	4.3977	28.964
73400	73659	31.948	1.1972	21183.	3.5343	1312.7	2.9560	4.4409	28.964
73600	73861	31.947	1.1855	21189.	3.4999	1312.9	2.9276	4.4846	28.964
73800	74062	31.947	1.1739	21195.	3.4658	1313.1	2.8995	4.5287	28.964
74000	74264	31.946	1.1625	21201.	3.4321	1313.3	2.8717	4.5732	28.964
74200	74465	31.945	1.1512	21208.	3.3987	1313.5	2.8442	4.6181	28.964
74400	74666	31.945	1.1399	21214.	3.3656	1313.7	2.8169	4.6635	28.964
74600	74868	31.944	1.1288	21220.	3.3329	1313.8	2.7899	4.7093	28.964
74800	75069	31.944	1.1178	21227.	3.3005	1314.0	2.7631	4.7555	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $V$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
59000	58834	31.993	2.4360 - 1	20924.	7.1814 +22	1305.6	5.9737 + 8	2.1856 - 6	28.964
59200	59032	31.992	2.4128	20924.	7.1131	1305.6	5.9169	2.2066	28.964
59400	59231	31.992	2.3898	20925.	7.0454	1305.6	5.8606	2.2278	28.964
59600	59430	31.991	2.3670	20925.	6.9784	1305.6	5.8048	2.2492	28.964
59800	59629	31.990	2.3444	20925.	6.9120	1305.6	5.7496	2.2708	28.964
60000	59828	31.990	2.3221	20926.	6.8462	1305.6	5.6949	2.2926	28.964
60200	60027	31.989	2.3000	20926.	6.7811	1305.6	5.6408	2.3146	28.964
60400	60226	31.988	2.2780	20927.	6.7166	1305.6	5.5871	2.3368	28.964
60600	60424	31.988	2.2563	20927.	6.6527	1305.6	5.5340	2.3593	28.964
60800	60623	31.987	2.2348	20927.	6.5895	1305.6	5.4813	2.3819	28.964
61000	60822	31.987	2.2135 - 1	20928.	6.5268 +22	1305.6	5.4292 + 8	2.4048 - 6	28.964
61200	61021	31.986	2.1924	20928.	6.4647	1305.6	5.3776	2.4279	28.964
61400	61220	31.985	2.1715	20929.	6.4032	1305.6	5.3264	2.4512	28.964
61600	61419	31.985	2.1508	20929.	6.3423	1305.6	5.2757	2.4747	28.964
61800	61617	31.984	2.1303	20929.	6.2820	1305.6	5.2256	2.4985	28.964
62000	61816	31.984	2.1100	20930.	6.2223	1305.6	5.1759	2.5225	28.964
62200	62015	31.983	2.0899	20930.	6.1631	1305.6	5.1267	2.5467	28.964
62400	62214	31.982	2.0700	20931.	6.1045	1305.6	5.0779	2.5712	28.964
62600	62413	31.982	2.0503	20931.	6.0464	1305.6	5.0296	2.5959	28.964
62800	62611	31.981	2.0308	20931.	5.9889	1305.6	4.9818	2.6208	28.964
63000	62810	31.981	2.0114 - 1	20932.	5.9320 +22	1305.6	4.9344 + 8	2.6459 - 6	28.964
63200	63009	31.980	1.9922	20932.	5.8756	1305.6	4.8875	2.6713	28.964
63400	63208	31.979	1.9733	20933.	5.8197	1305.6	4.8410	2.6970	28.964
63600	63407	31.979	1.9545	20933.	5.7643	1305.6	4.7950	2.7229	28.964
63800	63605	31.978	1.9358	20933.	5.7095	1305.6	4.7494	2.7490	28.964
64000	63804	31.977	1.9174	20934.	5.6552	1305.6	4.7042	2.7754	28.964
64200	64003	31.977	1.8991	20934.	5.6015	1305.6	4.6595	2.8021	28.964
64400	64202	31.976	1.8810	20935.	5.5482	1305.6	4.6152	2.8290	28.964
64600	64400	31.976	1.8631	20935.	5.4955	1305.6	4.5713	2.8561	28.964
64800	64599	31.975	1.8454	20935.	5.4432	1305.6	4.5278	2.8835	28.964
65000	64798	31.974	1.8278 - 1	20936.	5.3915 +22	1305.6	4.4848 + 8	2.9112 - 6	28.964
65200	64997	31.974	1.8104	20936.	5.3402	1305.6	4.4422	2.9391	28.964
65400	65196	31.973	1.7931	20937.	5.2894	1305.6	4.3999	2.9674	28.964
65600	65394	31.973	1.7760	20937.	5.2391	1305.6	4.3581	2.9958	28.964
65800	65593	31.972	1.7591	20937.	5.1893	1305.6	4.3167	3.0246	28.964
66000	65792	31.971	1.7419	20943.	5.1387	1305.8	4.2751	3.0544	28.964
66200	65991	31.971	1.7249	20949.	5.0885	1306.0	4.2339	3.0845	28.964
66400	66189	31.970	1.7080	20955.	5.0387	1306.1	4.1931	3.1150	28.964
66600	66388	31.970	1.6913	20962.	4.9895	1306.3	4.1527	3.1457	28.964
66800	66587	31.969	1.6747	20968.	4.9407	1306.5	4.1127	3.1768	28.964
67000	66785	31.968	1.6583 - 1	20974.	4.8925 +22	1306.7	4.0731 + 8	3.2081 - 6	28.964
67200	66984	31.968	1.6421	20980.	4.8447	1306.9	4.0339	3.2398	28.964
67400	67183	31.967	1.6260	20987.	4.7974	1307.1	3.9950	3.2717	28.964
67600	67382	31.966	1.6101	20993.	4.7506	1307.2	3.9566	3.3039	28.964
67800	67580	31.966	1.5944	20999.	4.7042	1307.4	3.9185	3.3365	28.964
68000	67779	31.965	1.5788	21005.	4.6584	1307.6	3.8809	3.3694	28.964
68200	67978	31.965	1.5634	21012.	4.6129	1307.8	3.8436	3.4025	28.964
68400	68176	31.964	1.5481	21018.	4.5680	1308.0	3.8066	3.4360	28.964
68600	68375	31.963	1.5330	21024.	4.5234	1308.1	3.7700	3.4698	28.964
68800	68574	31.963	1.5180	21030.	4.4794	1308.3	3.7338	3.5040	28.964
69000	68772	31.962	1.5032 - 1	21037.	4.4358 +22	1308.5	3.6980 + 8	3.5384 - 6	28.964
69200	68971	31.962	1.4886	21043.	4.3926	1308.7	3.6625	3.5732	28.964
69400	69170	31.961	1.4740	21049.	4.3498	1308.9	3.6274	3.6083	28.964
69600	69368	31.960	1.4597	21055.	4.3075	1309.1	3.5926	3.6438	28.964
69800	69567	31.960	1.4454	21062.	4.2656	1309.2	3.5581	3.6796	28.964
70000	69766	31.959	1.4314	21068.	4.2241	1309.4	3.5240	3.7157	28.964
70200	69964	31.959	1.4174	21074.	4.1830	1309.6	3.4902	3.7522	28.964
70400	70163	31.958	1.4036	21081.	4.1424	1309.8	3.4568	3.7890	28.964
70600	70362	31.957	1.3899	21087.	4.1021	1310.0	3.4237	3.8262	28.964
70800	70560	31.957	1.3764	21093.	4.0623	1310.1	3.3909	3.8637	28.964
71000	70759	31.956	1.3630 - 1	21099.	4.0228 +22	1310.3	3.3584 + 8	3.9016 - 6	28.964
71200	70958	31.955	1.3498	21106.	3.9838	1310.5	3.3263	3.9399	28.964
71400	71156	31.955	1.3366	21112.	3.9451	1310.7	3.2944	3.9785	28.964
71600	71355	31.954	1.3236	21118.	3.9069	1310.9	3.2629	4.0175	28.964
71800	71554	31.954	1.3108	21124.	3.8690	1311.1	3.2317	4.0568	28.964
72000	71752	31.953	1.2981	21131.	3.8314	1311.2	3.2008	4.0965	28.964
72200	71951	31.952	1.2854	21137.	3.7943	1311.4	3.1703	4.1366	28.964
72400	72150	31.952	1.2730	21143.	3.7575	1311.6	3.1400	4.1771	28.964
72600	72348	31.951	1.2606	21149.	3.7211	1311.8	3.1100	4.2180	28.964
72800	72547	31.951	1.2484	21156.	3.6851	1312.0	3.0803	4.2592	28.964
73000	72745	31.950	1.2363 - 1	21162.	3.6494 +22	1312.1	3.0509 + 8	4.3009 - 6	28.964
73200	72944	31.949	1.2243	21168.	3.6141	1312.3	3.0218	4.3429	28.964
73400	73143	31.949	1.2124	21174.	3.5791	1312.5	2.9930	4.3853	28.964
73600	73341	31.948	1.2007	21181.	3.5445	1312.7	2.9644	4.4282	28.964
73800	73540	31.948	1.1890	21187.	3.5102	1312.9	2.9362	4.4714	28.964
74000	73738	31.947	1.1775	21193.	3.4763	1313.1	2.9082	4.5151	28.964
74200	73937	31.946	1.1661	21199.	3.4427	1313.2	2.8805	4.5591	28.964
74400	74135	31.946	1.1548	21206.	3.4094	1313.4	2.8530	4.6036	28.964
74600	74334	31.945	1.1436	21212.	3.3765	1313.6	2.8259	4.6485	28.964
74800	74533	31.944	1.1326	21218.	3.3439	1313.8	2.7990	4.6938	28.964

TABLE V.—Continued  
 GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
75000	75271	31.943	1.1070 - 1	21233.	3.2684 +22	1314.2	2.7367 + 8	4.8022 - 6	28.964
75200	75472	31.942	1.0962	21239.	3.2367	1314.4	2.7105	4.8493	28.964
75400	75674	31.942	1.0855	21246.	3.2052	1314.6	2.6845	4.8969	28.964
75600	75875	31.941	1.0750	21252.	3.1741	1314.8	2.6588	4.9449	28.964
75800	76077	31.941	1.0645	21258.	3.1433	1314.9	2.6334	4.9934	28.964
76000	76278	31.940	1.0541	21264.	3.1128	1315.1	2.6082	5.0423	28.964
76200	76479	31.939	1.0439	21271.	3.0826	1315.3	2.5832	5.0917	28.964
76400	76681	31.939	1.0338	21277.	3.0527	1315.5	2.5585	5.1416	28.964
76600	76882	31.938	1.0237	21283.	3.0231	1315.7	2.5340	5.1919	28.964
76800	77084	31.937	1.0138	21290.	2.9938	1315.8	2.5098	5.2428	28.964
77000	77285	31.937	1.0039 - 1	21296.	2.9648 +22	1316.0	2.4858 + 8	5.2941 - 6	28.964
77200	77487	31.936	9.9417 - 2	21302.	2.9360	1316.2	2.4621	5.3459	28.964
77400	77688	31.936	9.8452	21309.	2.9076	1316.4	2.4386	5.3982	28.964
77600	77890	31.935	9.7497	21315.	2.8794	1316.6	2.4153	5.4510	28.964
77800	78091	31.934	9.6551	21321.	2.8515	1316.8	2.3923	5.5043	28.964
78000	78293	31.934	9.5615	21328.	2.8240	1316.9	2.3694	5.5580	28.964
78200	78494	31.933	9.4688	21334.	2.7966	1317.1	2.3468	5.6124	28.964
78400	78696	31.933	9.3770	21340.	2.7696	1317.3	2.3244	5.6672	28.964
78600	78897	31.932	9.2861	21346.	2.7428	1317.5	2.3023	5.7225	28.964
78800	79099	31.931	9.1962	21353.	2.7163	1317.7	2.2803	5.7784	28.964
79000	79300	31.931	9.1071 - 2	21359.	2.6900 +22	1317.8	2.2586 + 8	5.8348 - 6	28.964
79200	79502	31.930	9.0189	21365.	2.6640	1318.0	2.2371	5.8917	28.964
79400	79703	31.929	8.9316	21372.	2.6383	1318.2	2.2158	5.9492	28.964
79600	79905	31.929	8.8452	21378.	2.6128	1318.4	2.1947	6.0072	28.964
79800	80107	31.928	8.7596	21384.	2.5876	1318.6	2.1738	6.0658	28.964
80000	80308	31.928	8.6749	21391.	2.5626	1318.8	2.1531	6.1249	28.964
80200	80510	31.927	8.5910	21397.	2.5379	1318.9	2.1326	6.1846	28.964
80400	80711	31.926	8.5080	21403.	2.5134	1319.1	2.1124	6.2448	28.964
80600	80913	31.926	8.4258	21410.	2.4892	1319.3	2.0923	6.3056	28.964
80800	81114	31.925	8.3444	21416.	2.4652	1319.5	2.0724	6.3670	28.964
81000	81316	31.925	8.2638 - 2	21422.	2.4414 +22	1319.7	2.0527 + 8	6.4290 - 6	28.964
81200	81517	31.924	8.1840	21429.	2.4179	1319.8	2.0332	6.4915	28.964
81400	81719	31.923	8.1050	21435.	2.3946	1320.0	2.0139	6.5547	28.964
81600	81921	31.923	8.0268	21441.	2.3715	1320.2	1.9948	6.6184	28.964
81800	82122	31.922	7.9494	21447.	2.3487	1320.4	1.9758	6.6828	28.964
82000	82324	31.922	7.8727	21454.	2.3261	1320.6	1.9571	6.7477	28.964
82200	82525	31.921	7.7968	21460.	2.3037	1320.8	1.9385	6.8133	28.964
82400	82727	31.920	7.7216	21466.	2.2815	1320.9	1.9201	6.8795	28.964
82600	82928	31.920	7.6472	21473.	2.2596	1321.1	1.9019	6.9463	28.964
82800	83130	31.919	7.5735	21479.	2.2379	1321.3	1.8839	7.0137	28.964
83000	83332	31.918	7.5006 - 2	21485.	2.2163 +22	1321.5	1.8660 + 8	7.0818 - 6	28.964
83200	83533	31.918	7.4284	21492.	2.1950	1321.7	1.8484	7.1505	28.964
83400	83735	31.917	7.3568	21498.	2.1740	1321.8	1.8308	7.2199	28.964
83600	83937	31.917	7.2860	21504.	2.1531	1322.0	1.8135	7.2899	28.964
83800	84138	31.916	7.2159	21511.	2.1324	1322.2	1.7963	7.3606	28.964
84000	84340	31.915	7.1465	21517.	2.1119	1322.4	1.7793	7.4319	28.964
84200	84541	31.915	7.0778	21523.	2.0917	1322.6	1.7625	7.5039	28.964
84400	84743	31.914	7.0098	21530.	2.0716	1322.8	1.7458	7.5766	28.964
84600	84945	31.914	6.9424	21536.	2.0517	1322.9	1.7293	7.6500	28.964
84800	85146	31.913	6.8757	21542.	2.0320	1323.1	1.7130	7.7241	28.964
85000	85348	31.912	6.8097 - 2	21549.	2.0126 +22	1323.3	1.6968 + 8	7.7988 - 6	28.964
85200	85550	31.912	6.7443	21555.	1.9933	1323.5	1.6808	7.8743	28.964
85400	85751	31.911	6.6795	21561.	1.9742	1323.7	1.6649	7.9505	28.964
85600	85953	31.910	6.6154	21567.	1.9553	1323.8	1.6492	8.0274	28.964
85800	86154	31.910	6.5519	21574.	1.9365	1324.0	1.6336	8.1050	28.964
86000	86356	31.909	6.4891	21580.	1.9180	1324.2	1.6182	8.1833	28.964
86200	86558	31.909	6.4269	21586.	1.8997	1324.4	1.6029	8.2624	28.964
86400	86759	31.908	6.3652	21593.	1.8815	1324.6	1.5878	8.3422	28.964
86600	86961	31.907	6.3042	21599.	1.8635	1324.7	1.5728	8.4228	28.964
86800	87163	31.907	6.2438	21605.	1.8457	1324.9	1.5580	8.5041	28.964
87000	87364	31.906	6.1840 - 2	21612.	1.8280 +22	1325.1	1.5433 + 8	8.5862 - 6	28.964
87200	87566	31.906	6.1248	21618.	1.8105	1325.3	1.5288	8.6691	28.964
87400	87768	31.905	6.0661	21624.	1.7932	1325.5	1.5144	8.7527	28.964
87600	87970	31.904	6.0081	21631.	1.7761	1325.7	1.5001	8.8371	28.964
87800	88171	31.904	5.9506	21637.	1.7591	1325.8	1.4860	8.9223	28.964
88000	88373	31.903	5.8937	21643.	1.7424	1326.0	1.4720	9.0083	28.964
88200	88575	31.902	5.8373	21650.	1.7257	1326.2	1.4581	9.0951	28.964
88400	88776	31.902	5.7815	21656.	1.7093	1326.4	1.4444	9.1828	28.964
88600	88978	31.901	5.7262	21662.	1.6929	1326.6	1.4308	9.2712	28.964
88800	89180	31.901	5.6715	21669.	1.6768	1326.7	1.4174	9.3605	28.964
89000	89381	31.900	5.6173 - 2	21675.	1.6608 +22	1326.9	1.4041 + 8	9.4506 - 6	28.964
89200	89583	31.899	5.5637	21681.	1.6450	1327.1	1.3909	9.5415	28.964
89400	89785	31.899	5.5105	21688.	1.6293	1327.3	1.3778	9.6333	28.964
89600	89987	31.898	5.4579	21694.	1.6138	1327.5	1.3649	9.7260	28.964
89800	90188	31.898	5.4058	21700.	1.5984	1327.6	1.3520	9.8195	28.964
90000	90390	31.897	5.3543	21707.	1.5832	1327.8	1.3394	9.9139	28.964
90200	90592	31.896	5.3032	21713.	1.5681	1328.0	1.3268	1.0009 - 5	28.964
90400	90794	31.896	5.2526	21719.	1.5532	1328.2	1.3143	1.0105	28.964
90600	90995	31.895	5.2026	21725.	1.5384	1328.4	1.3020	1.0202	28.964
90800	91197	31.894	5.1530	21732.	1.5238	1328.5	1.2898	1.0300	28.964



## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
75000	74731	31.944	1.1216 - 1	21224.	3.3116 +22	1314.0	2.7723 + 8	4.7396 - 6	28.964
75200	74930	31.943	1.1108	21231.	3.2797	1314.1	2.7459	4.7858	28.964
75400	75128	31.943	1.1000	21237.	3.2480	1314.3	2.7198	4.8324	28.964
75600	75327	31.942	1.0894	21243.	3.2167	1314.5	2.6940	4.8794	28.964
75800	75525	31.941	1.0789	21250.	3.1857	1314.7	2.6684	4.9270	28.964
76000	75724	31.941	1.0685	21256.	3.1550	1314.9	2.6430	4.9749	28.964
76200	75923	31.940	1.0581	21262.	3.1246	1315.0	2.6179	5.0233	28.964
76400	76121	31.940	1.0479	21268.	3.0945	1315.2	2.5930	5.0722	28.964
76600	76320	31.939	1.0378	21275.	3.0647	1315.4	2.5684	5.1215	28.964
76800	76518	31.938	1.0278	21281.	3.0352	1315.6	2.5440	5.1713	28.964
77000	76717	31.938	1.0179 - 1	21287.	3.0059 +22	1315.8	2.5199 + 8	5.2215 - 6	28.964
77200	76915	31.937	1.0081	21293.	2.9770	1316.0	2.4960	5.2723	28.964
77400	77114	31.937	9.9836 - 2	21300.	2.9484	1316.1	2.4723	5.3235	28.964
77600	77312	31.936	9.8874	21306.	2.9200	1316.3	2.4489	5.3752	28.964
77800	77511	31.935	9.7922	21312.	2.8919	1316.5	2.4257	5.4274	28.964
78000	77709	31.935	9.6979	21318.	2.8642	1316.7	2.4027	5.4800	28.964
78200	77908	31.934	9.6045	21325.	2.8366	1316.9	2.3799	5.5332	28.964
78400	78106	31.933	9.5121	21331.	2.8094	1317.0	2.3574	5.5869	28.964
78600	78305	31.933	9.4205	21337.	2.7824	1317.2	2.3351	5.6410	28.964
78800	78503	31.932	9.3299	21343.	2.7557	1317.4	2.3130	5.6957	28.964
79000	78702	31.932	9.2402 - 2	21350.	2.7293 +22	1317.6	2.2911 + 8	5.7509 - 6	28.964
79200	78900	31.931	9.1514	21356.	2.7031	1317.8	2.2694	5.8066	28.964
79400	79099	31.930	9.0634	21362.	2.6771	1317.9	2.2480	5.8628	28.964
79600	79297	31.930	8.9764	21368.	2.6515	1318.1	2.2267	5.9196	28.964
79800	79496	31.929	8.8901	21375.	2.6261	1318.3	2.2057	5.9769	28.964
80000	79694	31.929	8.8048	21381.	2.6009	1318.5	2.1848	6.0347	28.964
80200	79893	31.928	8.7203	21387.	2.5760	1318.7	2.1642	6.0931	28.964
80400	80091	31.927	8.6366	21394.	2.5513	1318.8	2.1438	6.1520	28.964
80600	80290	31.927	8.5537	21400.	2.5269	1319.0	2.1235	6.2115	28.964
80800	80488	31.926	8.4717	21406.	2.5027	1319.2	2.1035	6.2715	28.964
81000	80687	31.926	8.3905 - 2	21412.	2.4787 +22	1319.4	2.0836 + 8	6.3321 - 6	28.964
81200	80885	31.925	8.3100	21419.	2.4550	1319.6	2.0640	6.3933	28.964
81400	81083	31.924	8.2304	21425.	2.4315	1319.7	2.0445	6.4550	28.964
81600	81282	31.924	8.1516	21431.	2.4083	1319.9	2.0253	6.5173	28.964
81800	81480	31.923	8.0735	21437.	2.3853	1320.1	2.0062	6.5802	28.964
82000	81679	31.922	7.9962	21444.	2.3625	1320.3	1.9873	6.6437	28.964
82200	81877	31.922	7.9197	21450.	2.3399	1320.5	1.9686	6.7078	28.964
82400	82076	31.921	7.8439	21456.	2.3176	1320.6	1.9500	6.7725	28.964
82600	82274	31.921	7.7688	21462.	2.2954	1320.8	1.9317	6.8377	28.964
82800	82473	31.920	7.6945	21469.	2.2735	1321.0	1.9135	6.9036	28.964
83000	82671	31.919	7.6210 - 2	21475.	2.2518 +22	1321.2	1.8955 + 8	6.9701 - 6	28.964
83200	82869	31.919	7.5481	21481.	2.2304	1321.4	1.8777	7.0372	28.964
83400	83068	31.918	7.4760	21487.	2.2091	1321.5	1.8600	7.1050	28.964
83600	83266	31.918	7.4046	21494.	2.1880	1321.7	1.8425	7.1734	28.964
83800	83465	31.917	7.3339	21500.	2.1672	1321.9	1.8252	7.2424	28.964
84000	83663	31.916	7.2639	21506.	2.1465	1322.1	1.8081	7.3121	28.964
84200	83861	31.916	7.1946	21513.	2.1261	1322.3	1.7911	7.3824	28.964
84400	84060	31.915	7.1259	21519.	2.1058	1322.4	1.7743	7.4534	28.964
84600	84258	31.915	7.0580	21525.	2.0858	1322.6	1.7576	7.5250	28.964
84800	84457	31.914	6.9907	21531.	2.0660	1322.8	1.7412	7.5973	28.964
85000	84655	31.913	6.9240 - 2	21538.	2.0463 +22	1323.0	1.7248 + 8	7.6703 - 6	28.964
85200	84853	31.913	6.8580	21544.	2.0268	1323.2	1.7087	7.7439	28.964
85400	85052	31.912	6.7927	21550.	2.0076	1323.3	1.6926	7.8183	28.964
85600	85250	31.912	6.7280	21556.	1.9885	1323.5	1.6768	7.8933	28.964
85800	85448	31.911	6.6639	21563.	1.9696	1323.7	1.6611	7.9690	28.964
86000	85647	31.910	6.6005	21569.	1.9509	1323.9	1.6455	8.0454	28.964
86200	85845	31.910	6.5377	21575.	1.9323	1324.1	1.6301	8.1226	28.964
86400	86043	31.909	6.4755	21581.	1.9140	1324.2	1.6148	8.2004	28.964
86600	86242	31.908	6.4139	21588.	1.8958	1324.4	1.5997	8.2790	28.964
86800	86440	31.908	6.3529	21594.	1.8778	1324.6	1.5848	8.3583	28.964
87000	86639	31.907	6.2925 - 2	21600.	1.8600 +22	1324.8	1.5699 + 8	8.4384 - 6	28.964
87200	86837	31.907	6.2327	21607.	1.8424	1325.0	1.5553	8.5192	28.964
87400	87035	31.906	6.1735	21613.	1.8249	1325.1	1.5407	8.6007	28.964
87600	87234	31.905	6.1149	21619.	1.8076	1325.3	1.5263	8.6830	28.964
87800	87432	31.905	6.0568	21625.	1.7905	1325.5	1.5121	8.7661	28.964
88000	87630	31.904	5.9994	21632.	1.7735	1325.7	1.4980	8.8499	28.964
88200	87829	31.904	5.9424	21638.	1.7567	1325.9	1.4840	8.9345	28.964
88400	88027	31.903	5.8861	21644.	1.7401	1326.0	1.4701	9.0199	28.964
88600	88225	31.902	5.8302	21650.	1.7236	1326.2	1.4564	9.1061	28.964
88800	88423	31.902	5.7750	21657.	1.7073	1326.4	1.4428	9.1931	28.964
89000	88622	31.901	5.7202 - 2	21663.	1.6912 +22	1326.6	1.4294 + 8	9.2809 - 6	28.964
89200	88820	31.901	5.6660	21669.	1.6752	1326.8	1.4160	9.3695	28.964
89400	89018	31.900	5.6124	21675.	1.6594	1326.9	1.4028	9.4589	28.964
89600	89217	31.899	5.5592	21682.	1.6437	1327.1	1.3898	9.5491	28.964
89800	89415	31.899	5.5066	21688.	1.6281	1327.3	1.3768	9.6402	28.964
90000	89613	31.898	5.4545	21694.	1.6128	1327.5	1.3640	9.7321	28.964
90200	89812	31.897	5.4029	21701.	1.5975	1327.7	1.3513	9.8249	28.964
90400	90010	31.897	5.3518	21707.	1.5825	1327.8	1.3387	9.9185	28.964
90600	90208	31.896	5.3012	21713.	1.5675	1328.0	1.3263	1.0013 - 5	28.964
90800	90406	31.896	5.2510	21719.	1.5527	1328.2	1.3139	1.0108	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
91000	91399	31.894	5.1039 - 2	21738.	1.5093 +22	1328.7	1.2777 + 8	1.0399 - 5	28.964
91200	91601	31.893	5.0553	21744.	1.4950	1328.9	1.2657	1.0499	28.964
91400	91802	31.893	5.0071	21751.	1.4807	1329.1	1.2539	1.0600	28.964
91600	92004	31.892	4.9595	21757.	1.4667	1329.3	1.2421	1.0701	28.964
91800	92206	31.891	4.9123	21763.	1.4527	1329.4	1.2305	1.0804	28.964
92000	92408	31.891	4.8655	21770.	1.4390	1329.6	1.2190	1.0908	28.964
92200	92609	31.890	4.8192	21776.	1.4253	1329.8	1.2076	1.1012	28.964
92400	92811	31.890	4.7734	21782.	1.4118	1330.0	1.1963	1.1118	28.964
92600	93013	31.889	4.7280	21789.	1.3984	1330.2	1.1851	1.1224	28.964
92800	93215	31.888	4.6831	21795.	1.3851	1330.3	1.1740	1.1332	28.964
93000	93417	31.888	4.6386 - 2	21801.	1.3720 +22	1330.5	1.1630 + 8	1.1440 - 5	28.964
93200	93618	31.887	4.5945	21808.	1.3590	1330.7	1.1522	1.1550	28.964
93400	93820	31.886	4.5509	21814.	1.3461	1330.9	1.1414	1.1660	28.964
93600	94022	31.886	4.5077	21820.	1.3333	1331.1	1.1307	1.1772	28.964
93800	94224	31.885	4.4649	21827.	1.3207	1331.2	1.1202	1.1884	28.964
94000	94426	31.885	4.4225	21833.	1.3082	1331.4	1.1097	1.1998	28.964
94200	94627	31.884	4.3806	21839.	1.2958	1331.6	1.0994	1.2113	28.964
94400	94829	31.883	4.3390	21846.	1.2835	1331.8	1.0891	1.2228	28.964
94600	95031	31.883	4.2979	21852.	1.2714	1332.0	1.0789	1.2345	28.964
94800	95233	31.882	4.2571	21858.	1.2594	1332.1	1.0689	1.2463	28.964
95000	95435	31.882	4.2168 - 2	21865.	1.2475 +22	1332.3	1.0589 + 8	1.2582 - 5	28.964
95200	95637	31.881	4.1768	21871.	1.2357	1332.5	1.0490	1.2702	28.964
95400	95838	31.880	4.1373	21877.	1.2240	1332.7	1.0393	1.2823	28.964
95600	96040	31.880	4.0981	21884.	1.2124	1332.9	1.0296	1.2946	28.964
95800	96242	31.879	4.0593	21890.	1.2010	1333.0	1.0200	1.3069	28.964
96000	96444	31.878	4.0209	21896.	1.1896	1333.2	1.0105	1.3194	28.964
96200	96646	31.878	3.9828	21903.	1.1784	1333.4	1.0011	1.3320	28.964
96400	96848	31.877	3.9452	21909.	1.1673	1333.6	9.9177 + 7	1.3447	28.964
96600	97050	31.877	3.9079	21915.	1.1562	1333.8	9.8254	1.3575	28.964
96800	97251	31.876	3.8709	21922.	1.1453	1333.9	9.7340	1.3704	28.964
97000	97453	31.875	3.8343 - 2	21928.	1.1345 +22	1334.1	9.6435 + 7	1.3834 - 5	28.964
97200	97655	31.875	3.7981	21934.	1.1238	1334.3	9.5539	1.3966	28.964
97400	97857	31.874	3.7622	21941.	1.1132	1334.5	9.4651	1.4099	28.964
97600	98059	31.874	3.7267	21947.	1.1027	1334.7	9.3771	1.4233	28.964
97800	98261	31.873	3.6915	21953.	1.0924	1334.8	9.2900	1.4369	28.964
98000	98463	31.872	3.6567	21960.	1.0821	1335.0	9.2038	1.4505	28.964
98200	98665	31.872	3.6222	21966.	1.0719	1335.2	9.1183	1.4643	28.964
98400	98867	31.871	3.5880	21972.	1.0618	1335.4	9.0337	1.4782	28.964
98600	99068	31.871	3.5542	21979.	1.0518	1335.6	8.9499	1.4923	28.964
98800	99270	31.870	3.5206	21985.	1.0419	1335.7	8.8668	1.5064	28.964
99000	99472	31.869	3.4875 - 2	21991.	1.0321 +22	1335.9	8.7846 + 7	1.5208 - 5	28.964
99200	99674	31.869	3.4546	21998.	1.0224	1336.1	8.7032	1.5352	28.964
99400	99876	31.868	3.4221	22004.	1.0128	1336.3	8.6225	1.5498	28.964
99600	100078	31.867	3.3898	22010.	1.0033	1336.5	8.5426	1.5645	28.964
99800	100280	31.867	3.3579	22017.	9.9383 +21	1336.6	8.4635	1.5793	28.964
100000	100482	31.866	3.3263	22023.	9.8449	1336.8	8.3851	1.5943	28.964
100200	100684	31.866	3.2950	22029.	9.7525	1337.0	8.3074	1.6094	28.964
100400	100886	31.865	3.2640	22036.	9.6609	1337.2	8.2306	1.6247	28.964
100600	101088	31.864	3.2333	22042.	9.5702	1337.4	8.1544	1.6400	28.964
100800	101290	31.864	3.2029	22048.	9.4804	1337.5	8.0789	1.6556	28.964
101000	101492	31.863	3.1728 - 2	22055.	9.3915 +21	1337.7	8.0042 + 7	1.6713 - 5	28.964
101200	101694	31.863	3.1430	22061.	9.3034	1337.9	7.9302	1.6871	28.964
101400	101895	31.862	3.1134	22067.	9.2162	1338.1	7.8569	1.7031	28.964
101600	102097	31.861	3.0842	22074.	9.1298	1338.3	7.7843	1.7192	28.964
101800	102299	31.861	3.0552	22080.	9.0442	1338.4	7.7124	1.7354	28.964
102000	102501	31.860	3.0265	22086.	8.9595	1338.6	7.6411	1.7519	28.964
102200	102703	31.859	2.9981	22093.	8.8755	1338.8	7.5706	1.7684	28.964
102400	102905	31.859	2.9700	22099.	8.7924	1339.0	7.5007	1.7851	28.964
102600	103107	31.858	2.9421	22105.	8.7101	1339.2	7.4315	1.8020	28.964
102800	103309	31.858	2.9145	22112.	8.6286	1339.3	7.3629	1.8190	28.964
103000	103511	31.857	2.8872 - 2	22118.	8.5478 +21	1339.5	7.2950 + 7	1.8362 - 5	28.964
103200	103713	31.856	2.8601	22124.	8.4679	1339.7	7.2277	1.8535	28.964
103400	103915	31.856	2.8333	22131.	8.3887	1339.9	7.1611	1.8710	28.964
103600	104117	31.855	2.8068	22137.	8.3103	1340.0	7.0951	1.8887	28.964
103800	104319	31.855	2.7805	22143.	8.2326	1340.2	7.0297	1.9065	28.964
104000	104521	31.854	2.7545	22150.	8.1557	1340.4	6.9649	1.9245	28.964
104200	104723	31.853	2.7287	22156.	8.0795	1340.6	6.9008	1.9427	28.964
104400	104925	31.853	2.7032	22162.	8.0040	1340.8	6.8372	1.9610	28.964
104600	105127	31.852	2.6779	22169.	7.9293	1340.9	6.7743	1.9795	28.964
104800	105329	31.851	2.6528	22175.	7.8553	1341.1	6.7120	1.9981	28.964
105000	105531	31.851	2.6279 - 2	22182.	7.7817 +21	1341.3	6.6501 + 7	2.0170 - 5	28.964
105500	106036	31.849	2.5639	22225.	7.5925	1342.6	6.4945	2.0673	28.964
106000	106542	31.848	2.5016	22267.	7.4083	1343.8	6.3428	2.1187	28.964
106500	107047	31.846	2.4409	22310.	7.2288	1345.1	6.1949	2.1713	28.964
107000	107552	31.845	2.3817	22352.	7.0540	1346.3	6.0507	2.2251	28.964
107500	108057	31.843	2.3241	22395.	6.8838	1347.6	5.9101	2.2801	28.964
108000	108562	31.842	2.2680	22437.	6.7180	1348.8	5.7731	2.3364	28.964
108500	109067	31.840	2.2134	22479.	6.5564	1350.1	5.6395	2.3939	28.964
109000	109573	31.839	2.1602	22522.	6.3990	1351.3	5.5092	2.4528	28.964
109500	110078	31.837	2.1083	22564.	6.2457	1352.5	5.3821	2.5130	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
91000	90605	31.895	5.2014 - 2	21726.	1.5381 +22	1328.4	1.3017 + 8	1.0205 - 5	28.964
91200	90803	31.894	5.1523	21732.	1.5236	1328.5	1.2896	1.0302	28.964
91400	91001	31.894	5.1036	21738.	1.5092	1328.7	1.2776	1.0400	28.964
91600	91199	31.893	5.0554	21744.	1.4950	1328.9	1.2658	1.0499	28.964
91800	91398	31.893	5.0077	21751.	1.4809	1329.1	1.2540	1.0599	28.964
92000	91596	31.892	4.9604	21757.	1.4670	1329.3	1.2424	1.0699	28.964
92200	91794	31.891	4.9136	21763.	1.4532	1329.4	1.2308	1.0801	28.964
92400	91992	31.891	4.8673	21770.	1.4395	1329.6	1.2194	1.0904	28.964
92600	92191	31.890	4.8214	21776.	1.4259	1329.8	1.2081	1.1007	28.964
92800	92389	31.890	4.7759	21782.	1.4125	1330.0	1.1969	1.1112	28.964
93000	92587	31.889	4.7309 - 2	21788.	1.3992 +22	1330.2	1.1858 + 8	1.1217 - 5	28.964
93200	92785	31.888	4.6864	21795.	1.3861	1330.3	1.1748	1.1324	28.964
93400	92984	31.888	4.6422	21801.	1.3730	1330.5	1.1639	1.1431	28.964
93600	93182	31.887	4.5985	21807.	1.3601	1330.7	1.1531	1.1540	28.964
93800	93380	31.887	4.5552	21813.	1.3474	1330.9	1.1425	1.1649	28.964
94000	93578	31.886	4.5124	21820.	1.3347	1331.0	1.1319	1.1760	28.964
94200	93776	31.885	4.4699	21826.	1.3222	1331.2	1.1214	1.1871	28.964
94400	93975	31.885	4.4279	21832.	1.3098	1331.4	1.1110	1.1983	28.964
94600	94173	31.884	4.3863	21838.	1.2975	1331.6	1.1008	1.2097	28.964
94800	94371	31.883	4.3450	21845.	1.2853	1331.8	1.0906	1.2212	28.964
95000	94569	31.883	4.3042 - 2	21851.	1.2733 +22	1331.9	1.0805 + 8	1.2327 - 5	28.964
95200	94767	31.882	4.2638	21857.	1.2613	1332.1	1.0705	1.2444	28.964
95400	94966	31.882	4.2237	21864.	1.2495	1332.3	1.0606	1.2562	28.964
95600	95164	31.881	4.1841	21870.	1.2378	1332.5	1.0508	1.2680	28.964
95800	95362	31.880	4.1448	21876.	1.2262	1332.7	1.0411	1.2800	28.964
96000	95560	31.880	4.1059	21882.	1.2147	1332.8	1.0315	1.2921	28.964
96200	95758	31.879	4.0674	21889.	1.2033	1333.0	1.0220	1.3043	28.964
96400	95956	31.879	4.0292	21895.	1.1921	1333.2	1.0126	1.3167	28.964
96600	96155	31.878	3.9915	21901.	1.1809	1333.4	1.0032	1.3291	28.964
96800	96353	31.877	3.9540	21907.	1.1699	1333.5	9.9396 + 7	1.3416	28.964
97000	96551	31.877	3.9170 - 2	21914.	1.1589 +22	1333.7	9.8480 + 7	1.3543 - 5	28.964
97200	96749	31.876	3.8803	21920.	1.1481	1333.9	9.7572	1.3671	28.964
97400	96947	31.876	3.8440	21926.	1.1374	1334.1	9.6673	1.3800	28.964
97600	97145	31.875	3.8080	21933.	1.1268	1334.3	9.5783	1.3930	28.964
97800	97343	31.874	3.7723	21939.	1.1162	1334.4	9.4901	1.4061	28.964
98000	97542	31.874	3.7370	21945.	1.1058	1334.6	9.4027	1.4194	28.964
98200	97740	31.873	3.7021	21951.	1.0955	1334.8	9.3162	1.4328	28.964
98400	97938	31.873	3.6675	21958.	1.0853	1335.0	9.2305	1.4463	28.964
98600	98136	31.872	3.6332	21964.	1.0751	1335.1	9.1456	1.4599	28.964
98800	98334	31.871	3.5992	21970.	1.0651	1335.3	9.0615	1.4736	28.964
99000	98532	31.871	3.5656 - 2	21976.	1.0552 +22	1335.5	8.9782 + 7	1.4875 - 5	28.964
99200	98730	31.870	3.5323	21983.	1.0453	1335.7	8.8957	1.5015	28.964
99400	98928	31.869	3.4993	21989.	1.0356	1335.9	8.8140	1.5156	28.964
99600	99127	31.869	3.4666	21995.	1.0259	1336.0	8.7330	1.5299	28.964
99800	99325	31.868	3.4343	22002.	1.0164	1336.2	8.6528	1.5443	28.964
100000	99523	31.868	3.4022	22008.	1.0069	1336.4	8.5734	1.5588	28.964
100200	99721	31.867	3.3705	22014.	9.9755 +21	1336.6	8.4947	1.5734	28.964
100400	99919	31.866	3.3391	22020.	9.8827	1336.7	8.4168	1.5882	28.964
100600	100117	31.866	3.3079	22027.	9.7908	1336.9	8.3396	1.6031	28.964
100800	100315	31.865	3.2771	22033.	9.6997	1337.1	8.2631	1.6182	28.964
101000	100513	31.865	3.2466 - 2	22039.	9.6095 +21	1337.3	8.1874 + 7	1.6333 - 5	28.964
101200	100711	31.864	3.2163	22046.	9.5202	1337.5	8.1123	1.6487	28.964
101400	100909	31.863	3.1864	22052.	9.4317	1337.6	8.0380	1.6641	28.964
101600	101107	31.863	3.1567	22058.	9.3441	1337.8	7.9644	1.6797	28.964
101800	101305	31.862	3.1274	22064.	9.2573	1338.0	7.8915	1.6955	28.964
102000	101504	31.862	3.0983	22071.	9.1713	1338.2	7.8192	1.7114	28.964
102200	101702	31.861	3.0694	22077.	9.0862	1338.3	7.7477	1.7274	28.964
102400	101900	31.860	3.0409	22083.	9.0019	1338.5	7.6768	1.7436	28.964
102600	102098	31.860	3.0126	22089.	8.9184	1338.7	7.6066	1.7599	28.964
102800	102296	31.859	2.9846	22096.	8.8357	1338.9	7.5370	1.7764	28.964
103000	102494	31.859	2.9569 - 2	22102.	8.7537 +21	1339.1	7.4681 + 7	1.7930 - 5	28.964
103200	102692	31.858	2.9294	22108.	8.6726	1339.2	7.3999	1.8098	28.964
103400	102890	31.857	2.9022	22115.	8.5922	1339.4	7.3323	1.8267	28.964
103600	103088	31.857	2.8753	22121.	8.5126	1339.6	7.2653	1.8438	28.964
103800	103286	31.856	2.8486	22127.	8.4338	1339.8	7.1990	1.8610	28.964
104000	103484	31.856	2.8222	22133.	8.3557	1339.9	7.1333	1.8784	28.964
104200	103682	31.855	2.7960	22140.	8.2784	1340.1	7.0682	1.8960	28.964
104400	103880	31.854	2.7701	22146.	8.2018	1340.3	7.0037	1.9137	28.964
104600	104078	31.854	2.7444	22152.	8.1259	1340.5	6.9398	1.9316	28.964
104800	104276	31.853	2.7190	22158.	8.0507	1340.7	6.8766	1.9496	28.964
105000	104474	31.852	2.6938 - 2	22165.	7.9763 +21	1340.8	6.8139 + 7	1.9678 - 5	28.964
105200	104672	31.851	2.6681	22171.	7.9013	1341.0	6.7513	1.9860	28.964
105400	104870	31.850	2.6428	22177.	7.8266	1341.2	6.6892	2.0044	28.964
105600	105068	31.849	2.6176	22183.	7.7522	1341.4	6.6276	2.0230	28.964
105800	105266	31.848	2.5926	22189.	7.6781	1341.6	6.5664	2.0418	28.964
106000	105464	31.847	2.5678	22195.	7.6042	1341.8	6.5056	2.0608	28.964
106200	105662	31.846	2.5432	22201.	7.5306	1342.0	6.4452	2.0800	28.964
106400	105860	31.845	2.5188	22207.	7.4573	1342.2	6.3852	2.1000	28.964
106600	106058	31.844	2.4946	22213.	7.3843	1342.4	6.3256	2.1202	28.964
106800	106256	31.843	2.4706	22219.	7.3116	1342.6	6.2664	2.1406	28.964
107000	106454	31.842	2.4468	22225.	7.2392	1342.8	6.2076	2.1612	28.964
107200	106652	31.841	2.4232	22231.	7.1671	1343.0	6.1492	2.1820	28.964
107400	106850	31.840	2.4000	22237.	7.0952	1343.2	6.0912	2.2030	28.964
107600	107048	31.839	2.3770	22243.	7.0236	1343.4	6.0336	2.2242	28.964
107800	107246	31.838	2.3542	22249.	6.9522	1343.6	5.9764	2.2456	28.964
108000	107444	31.837	2.3316	22255.	6.8811	1343.8	5.9196	2.2672	28.964
108200	107642	31.836	2.3092	22261.	6.8102	1344.0	5.8632	2.2890	28.964
108400	107840	31.835	2.2870	22267.	6.7395	1344.2	5.8072	2.3110	28.964
108600	108038	31.834	2.2650	22273.	6.6691	1344.4	5.7516	2.3332	28.964
108800	108236	31.833	2.2432	22279.	6.5989	1344.6	5.6964	2.3556	28.964
109000	108434	31.832	2.2216	22285.	6.5289	1344.8	5.6416	2.3782	28.964
109200	108632	31.831	2.2002	22291.	6.4592	1345.0	5.5872	2.4010	28.964
109400	108830	31.830	2.1790	22297.	6.3897	1345.2	5.5332	2.4240	28.964
109600	109028	31.829	2.1580	22303.	6.3204	1345.4	5.4796	2.4472	28.964
109800	109226	31.828	2.1372	22309.	6.2514	1345.6	5.4264	2.4706	28.964
110000	109424	31.827	2.1166	22315.	6.1826	1345.8	5.3736	2.4942	28.964
110200	109622	31.826	2.0962	22321.	6.1141	1346.0	5.3212	2.5180	28.964
110400	109820	31.825	2.0760	22327.	6.0459	1346.2	5.2692	2.5420	28.964
110600	110018	31.824	2.0560	22333.	5.9779	1346.4	5.2176	2.5662	28.964
110800	110216	31.823	2.0362	22339.	5.9102	1346.6	5.1664	2.5906	28.964
111000	110414	31.822	2.0166	22345.	5.8428	1346.8	5.1156	2.6152	28.964
111200	110612	31.821	1.9972	22351.	5.7757	1347.0	5.0652	2.6400	28.964
111400	110810	31.820	1.9780	22357.	5.7089	1347.2	5.0152	2.6650	28.964
111600	111008	31.819	1.9590	22363.	5.6424	1347.4	4.9656	2.6902	

## GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
110000	110583	31.835	2.0578 - 2	22607.	6.0964 +21	1353.8	5.2582 + 7	2.5746 - 5	28.964
110500	111089	31.834	2.0086	22649.	5.9508	1355.0	5.1374	2.6376	28.964
111000	111594	31.832	1.9606	22692.	5.8090	1356.3	5.0195	2.7019	28.964
111500	112099	31.831	1.9139	22735.	5.6708	1357.5	4.9046	2.7678	28.964
112000	112605	31.829	1.8683	22777.	5.5362	1358.7	4.7925	2.8351	28.964
112500	113110	31.828	1.8240	22820.	5.4050	1360.0	4.6832	2.9039	28.964
113000	113616	31.826	1.7807	22862.	5.2771	1361.2	4.5765	2.9743	28.964
113500	114121	31.825	1.7386	22905.	5.1525	1362.4	4.4725	3.0462	28.964
114000	114627	31.823	1.6975	22947.	5.0310	1363.7	4.3710	3.1198	28.964
114500	115132	31.822	1.6575	22990.	4.9126	1364.9	4.2720	3.1950	28.964
115000	115638	31.820	1.6185 - 2	23032.	4.7972 +21	1366.1	4.1754 + 7	3.2718 - 5	28.964
115500	116143	31.819	1.5805	23075.	4.6847	1367.3	4.0812	3.3504	28.964
116000	116649	31.817	1.5434	23117.	4.5751	1368.6	3.9892	3.4307	28.964
116500	117155	31.816	1.5073	23160.	4.4682	1369.8	3.8995	3.5128	28.964
117000	117660	31.814	1.4720	23202.	4.3640	1371.0	3.8120	3.5966	28.964
117500	118166	31.812	1.4377	23245.	4.2624	1372.3	3.7265	3.6824	28.964
118000	118672	31.811	1.4042	23288.	4.1633	1373.5	3.6432	3.7700	28.964
118500	119177	31.809	1.3716	23330.	4.0667	1374.7	3.5618	3.8596	28.964
119000	119683	31.808	1.3397	23373.	3.9725	1375.9	3.4824	3.9511	28.964
119500	120189	31.806	1.3087	23415.	3.8807	1377.1	3.4049	4.0446	28.964
120000	120695	31.805	1.2784 - 2	23458.	3.7911 +21	1378.4	3.3293 + 7	4.1401 - 5	28.964
120500	121200	31.803	1.2489	23500.	3.7038	1379.6	3.2554	4.2378	28.964
121000	121706	31.802	1.2201	23543.	3.6186	1380.8	3.1834	4.3375	28.964
121500	122212	31.800	1.1921	23586.	3.5355	1382.0	3.1130	4.4394	28.964
122000	122718	31.799	1.1647	23628.	3.4545	1383.2	3.0443	4.5436	28.964
122500	123224	31.797	1.1380	23671.	3.3754	1384.4	2.9773	4.6500	28.964
123000	123730	31.796	1.1119	23714.	3.2983	1385.6	2.9118	4.7587	28.964
123500	124236	31.794	1.0865	23756.	3.2231	1386.9	2.8479	4.8697	28.964
124000	124742	31.793	1.0617	23799.	3.1498	1388.1	2.7855	4.9831	28.964
124500	125248	31.791	1.0376	23841.	3.0782	1389.3	2.7246	5.0990	28.964
125000	125754	31.789	1.0140 - 2	23884.	3.0084 +21	1390.5	2.6651 + 7	5.2173 - 5	28.964
125500	126260	31.788	9.9098 - 3	23927.	2.9403	1391.7	2.6070	5.3382	28.964
126000	126766	31.786	9.6853	23969.	2.8738	1392.9	2.5503	5.4617	28.964
126500	127272	31.785	9.4663	24012.	2.8089	1394.1	2.4949	5.5878	28.964
127000	127778	31.783	9.2526	24055.	2.7457	1395.3	2.4408	5.7165	28.964
127500	128284	31.782	9.0440	24097.	2.6839	1396.5	2.3880	5.8481	28.964
128000	128791	31.780	8.8406	24140.	2.6236	1397.7	2.3364	5.9824	28.964
128500	129297	31.779	8.6420	24182.	2.5648	1398.9	2.2860	6.1195	28.964
129000	129803	31.777	8.4482	24225.	2.5075	1400.1	2.2367	6.2596	28.964
129500	130309	31.776	8.2591	24268.	2.4514	1401.3	2.1886	6.4026	28.964
130000	130816	31.774	8.0745 - 3	24310.	2.3968 +21	1402.5	2.1417 + 7	6.5487 - 5	28.964
130500	131322	31.773	7.8944	24353.	2.3434	1403.7	2.0958	6.6978	28.964
131000	131828	31.771	7.7186	24396.	2.2913	1404.9	2.0509	6.8500	28.964
131500	132335	31.770	7.5470	24438.	2.2405	1406.1	2.0071	7.0054	28.964
132000	132841	31.768	7.3794	24481.	2.1909	1407.3	1.9643	7.1641	28.964
132500	133347	31.766	7.2159	24524.	2.1424	1408.5	1.9225	7.3261	28.964
133000	133854	31.765	7.0563	24567.	2.0951	1409.7	1.8817	7.4915	28.964
133500	134360	31.763	6.9004	24609.	2.0490	1410.9	1.8418	7.6603	28.964
134000	134867	31.762	6.7483	24652.	2.0039	1412.0	1.8028	7.8327	28.964
134500	135373	31.760	6.5997	24695.	1.9599	1413.2	1.7646	8.0086	28.964
135000	135880	31.759	6.4547 - 3	24737.	1.9169 +21	1414.4	1.7274 + 7	8.1882 - 5	28.964
135500	136386	31.757	6.3131	24780.	1.8749	1415.6	1.6910	8.3714	28.964
136000	136893	31.756	6.1748	24823.	1.8339	1416.8	1.6554	8.5585	28.964
136500	137399	31.754	6.0397	24866.	1.7939	1418.0	1.6207	8.7494	28.964
137000	137906	31.753	5.9079	24908.	1.7548	1419.2	1.5867	8.9443	28.964
137500	138413	31.751	5.7791	24951.	1.7167	1420.3	1.5535	9.1431	28.964
138000	138919	31.750	5.6534	24994.	1.6794	1421.5	1.5210	9.3460	28.964
138500	139426	31.748	5.5305	25036.	1.6430	1422.7	1.4893	9.5531	28.964
139000	139933	31.747	5.4106	25079.	1.6074	1423.9	1.4582	9.7644	28.964
139500	140440	31.745	5.2934	25122.	1.5727	1425.1	1.4279	9.9801	28.964
140000	140946	31.743	5.1790 - 3	25165.	1.5388 +21	1426.2	1.3983 + 7	1.0200 - 4	28.964
140500	141453	31.742	5.0672	25207.	1.5056	1427.4	1.3693	1.0425	28.964
141000	141960	31.740	4.9580	25250.	1.4733	1428.6	1.3409	1.0654	28.964
141500	142467	31.739	4.8514	25293.	1.4416	1429.8	1.3132	1.0887	28.964
142000	142974	31.737	4.7472	25336.	1.4107	1430.9	1.2861	1.1126	28.964
142500	143480	31.736	4.6454	25378.	1.3806	1432.1	1.2597	1.1369	28.964
143000	143987	31.734	4.5459	25421.	1.3511	1433.3	1.2338	1.1617	28.964
143500	144494	31.733	4.4488	25464.	1.3223	1434.5	1.2084	1.1870	28.964
144000	145001	31.731	4.3538	25507.	1.2941	1435.6	1.1837	1.2129	28.964
144500	145508	31.730	4.2611	25550.	1.2666	1436.8	1.1594	1.2392	28.964
145000	146015	31.728	4.1704 - 3	25592.	1.2397 +21	1438.0	1.1358 + 7	1.2661 - 4	28.964
145500	146522	31.727	4.0818	25635.	1.2134	1439.1	1.1126	1.2935	28.964
146000	147029	31.725	3.9953	25678.	1.1878	1440.3	1.0899	1.3214	28.964
146500	147537	31.724	3.9107	25721.	1.1627	1441.5	1.0678	1.3500	28.964
147000	148044	31.722	3.8281	25764.	1.1382	1442.6	1.0461	1.3790	28.964
147500	148551	31.720	3.7473	25806.	1.1142	1443.8	1.0249	1.4087	28.964
148000	149058	31.719	3.6683	25849.	1.0908	1445.0	1.0042	1.4390	28.964
148500	149565	31.717	3.5912	25892.	1.0679	1446.1	9.8388 + 6	1.4698	28.964
149000	150072	31.716	3.5157	25935.	1.0455	1447.3	9.6404	1.5013	28.964
149500	150580	31.714	3.4420	25978.	1.0236	1448.4	9.4462	1.5333	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
110000	109423	31.837	2.1162 - 2	22558.	6.2691 +21	1352.3	5.4015 + 7	2.5036 - 5	28.964
110500	109918	31.836	2.0660	22600.	6.1207	1353.6	5.2784	2.5643	28.964
111000	110412	31.834	2.0171	22642.	5.9761	1354.8	5.1584	2.6264	28.964
111500	110907	31.833	1.9694	22684.	5.8351	1356.0	5.0412	2.6899	28.964
112000	111402	31.831	1.9230	22726.	5.6977	1357.2	4.9270	2.7547	28.964
112500	111896	31.830	1.8777	22768.	5.5638	1358.5	4.8155	2.8210	28.964
113000	112391	31.828	1.8335	22810.	5.4333	1359.7	4.7068	2.8888	28.964
113500	112886	31.827	1.7905	22852.	5.3061	1360.9	4.6007	2.9581	28.964
114000	113380	31.825	1.7486	22894.	5.1821	1362.1	4.4972	3.0288	28.964
114500	113875	31.824	1.7077	22936.	5.0612	1363.4	4.3962	3.1012	28.964
115000	114369	31.822	1.6679 - 2	22979.	4.9433 +21	1364.6	4.2977 + 7	3.1751 - 5	28.964
115500	114864	31.821	1.6290	23021.	4.8284	1365.8	4.2015	3.2507	28.964
116000	115358	31.819	1.5911	23063.	4.7163	1367.0	4.1077	3.3279	28.964
116500	115853	31.818	1.5542	23105.	4.6071	1368.2	4.0161	3.4069	28.964
117000	116347	31.816	1.5182	23147.	4.5006	1369.4	3.9267	3.4875	28.964
117500	116842	31.815	1.4831	23189.	4.3967	1370.6	3.8395	3.5699	28.964
118000	117336	31.813	1.4489	23231.	4.2954	1371.9	3.7543	3.6541	28.964
118500	117830	31.811	1.4155	23273.	4.1966	1373.1	3.6712	3.7401	28.964
119000	118325	31.810	1.3829	23315.	4.1003	1374.3	3.5901	3.8279	28.964
119500	118819	31.808	1.3512	23357.	4.0063	1375.5	3.5109	3.9177	28.964
120000	119313	31.807	1.3202 - 2	23399.	3.9147 +21	1376.7	3.4336 + 7	4.0094 - 5	28.964
120500	119808	31.805	1.2900	23442.	3.8253	1377.9	3.3581	4.1031	28.964
121000	120302	31.804	1.2605	23484.	3.7381	1379.1	3.2845	4.1988	28.964
121500	120796	31.802	1.2318	23526.	3.6530	1380.3	3.2125	4.2966	28.964
122000	121290	31.801	1.2037	23568.	3.5701	1381.5	3.1423	4.3965	28.964
122500	121785	31.799	1.1764	23610.	3.4891	1382.7	3.0737	4.4984	28.964
123000	122279	31.798	1.1497	23652.	3.4102	1383.9	3.0068	4.6026	28.964
123500	122773	31.796	1.1237	23694.	3.3331	1385.1	2.9414	4.7090	28.964
124000	123267	31.795	1.0983	23736.	3.2579	1386.3	2.8775	4.8177	28.964
124500	123761	31.793	1.0735	23778.	3.1846	1387.5	2.8152	4.9286	28.964
125000	124255	31.792	1.0493 - 2	23820.	3.1130 +21	1388.7	2.7543 + 7	5.0419 - 5	28.964
125500	124749	31.790	1.0257	23863.	3.0432	1389.9	2.6948	5.1576	28.964
126000	125243	31.789	1.0027	23905.	2.9750	1391.1	2.6367	5.2758	28.964
126500	125737	31.787	9.8026 - 3	23947.	2.9085	1392.3	2.5800	5.3965	28.964
127000	126231	31.786	9.5833	23989.	2.8436	1393.5	2.5245	5.5196	28.964
127500	126725	31.784	9.3694	24031.	2.7802	1394.6	2.4704	5.6454	28.964
128000	127219	31.783	9.1606	24073.	2.7184	1395.8	2.4175	5.7738	28.964
128500	127713	31.781	8.9568	24115.	2.6581	1397.0	2.3658	5.9049	28.964
129000	128207	31.780	8.7578	24157.	2.5991	1398.2	2.3154	6.0388	28.964
129500	128701	31.778	8.5636	24200.	2.5416	1399.4	2.2661	6.1754	28.964
130000	129195	31.777	8.3741 - 3	24242.	2.4855 +21	1400.6	2.2179 + 7	6.3149 - 5	28.964
130500	129688	31.775	8.1890	24284.	2.4307	1401.8	2.1708	6.4573	28.964
131000	130182	31.774	8.0084	24326.	2.3772	1402.9	2.1248	6.6026	28.964
131500	130676	31.772	7.8320	24368.	2.3249	1404.1	2.0799	6.7510	28.964
132000	131170	31.771	7.6599	24410.	2.2739	1405.3	2.0360	6.9024	28.964
132500	131663	31.769	7.4918	24452.	2.2241	1406.5	1.9930	7.0569	28.964
133000	132157	31.768	7.3276	24495.	2.1755	1407.7	1.9511	7.2147	28.964
133500	132651	31.766	7.1674	24537.	2.1280	1408.8	1.9101	7.3756	28.964
134000	133144	31.764	7.0109	24579.	2.0817	1410.0	1.8701	7.5399	28.964
134500	133638	31.763	6.8580	24621.	2.0364	1411.2	1.8309	7.7076	28.964
135000	134132	31.761	6.7088 - 3	24663.	1.9922 +21	1412.4	1.7926 + 7	7.8786 - 5	28.964
135500	134625	31.760	6.5631	24705.	1.9490	1413.5	1.7552	8.0532	28.964
136000	135119	31.758	6.4207	24747.	1.9068	1414.7	1.7187	8.2313	28.964
136500	135612	31.757	6.2817	24790.	1.8656	1415.9	1.6829	8.4131	28.964
137000	136106	31.755	6.1459	24832.	1.8254	1417.0	1.6480	8.5986	28.964
137500	136599	31.754	6.0133	24874.	1.7861	1418.2	1.6138	8.7878	28.964
138000	137093	31.752	5.8838	24916.	1.7477	1419.4	1.5805	8.9808	28.964
138500	137586	31.751	5.7572	24958.	1.7102	1420.5	1.5478	9.1778	28.964
139000	138080	31.749	5.6336	25000.	1.6735	1421.7	1.5159	9.3787	28.964
139500	138573	31.748	5.5129	25043.	1.6377	1422.9	1.4847	9.5837	28.964
140000	139066	31.746	5.3949 - 3	25085.	1.6028 +21	1424.0	1.4542 + 7	9.7928 - 5	28.964
140500	139560	31.745	5.2796	25127.	1.5686	1425.2	1.4243	1.0006 - 4	28.964
141000	140053	31.743	5.1670	25169.	1.5352	1426.4	1.3952	1.0224	28.964
141500	140546	31.742	5.0570	25211.	1.5026	1427.5	1.3666	1.0446	28.964
142000	141040	31.740	4.9495	25254.	1.4707	1428.7	1.3387	1.0672	28.964
142500	141533	31.739	4.8445	25296.	1.4396	1429.8	1.3114	1.0903	28.964
143000	142026	31.737	4.7418	25338.	1.4092	1431.0	1.2847	1.1138	28.964
143500	142519	31.736	4.6415	25380.	1.3794	1432.2	1.2586	1.1379	28.964
144000	143012	31.734	4.5435	25422.	1.3503	1433.3	1.2331	1.1623	28.964
144500	143506	31.733	4.4477	25464.	1.3219	1434.5	1.2082	1.1873	28.964
145000	143999	31.731	4.3541 - 3	25507.	1.2942 +21	1435.6	1.1837 + 7	1.2128 - 4	28.964
145500	144492	31.730	4.2626	25549.	1.2670	1436.8	1.1598	1.2388	28.964
146000	144985	31.728	4.1731	25591.	1.2405	1437.9	1.1365	1.2653	28.964
146500	145478	31.727	4.0857	25633.	1.2146	1439.1	1.1136	1.2923	28.964
147000	145971	31.725	4.0003	25675.	1.1892	1440.2	1.0912	1.3198	28.964
147500	146464	31.724	3.9167	25718.	1.1645	1441.4	1.0694	1.3479	28.964
148000	146957	31.722	3.8351	25760.	1.1402	1442.5	1.0480	1.3765	28.964
148500	147450	31.721	3.7553	25802.	1.1166	1443.7	1.0270	1.4057	28.964
149000	147943	31.719	3.6773	25844.	1.0934	1444.8	1.0065	1.4355	28.964
149500	148436	31.718	3.6010	25887.	1.0708	1446.0	9.8646 + 6	1.4658	28.964



TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
150000	151087	31.713	3.3700 - 3	26020.	1.0022 +21	1449.6	9.2563 + 6	1.5661 - 4	28.964
150500	151594	31.711	3.2995	26063.	9.8134 +20	1450.7	9.0705	1.5994	28.964
151000	152101	31.710	3.2307	26106.	9.6091	1451.9	8.8887	1.6334	28.964
151500	152609	31.708	3.1633	26149.	9.4093	1453.1	8.7109	1.6681	28.964
152000	153116	31.707	3.0975	26192.	9.2140	1454.2	8.5368	1.7035	28.964
152500	153623	31.705	3.0332	26235.	9.0230	1455.4	8.3665	1.7395	28.964
153000	154131	31.704	2.9703	26278.	8.8363	1456.5	8.1999	1.7763	28.964
153500	154638	31.702	2.9088	26320.	8.6538	1457.7	8.0369	1.8137	28.964
154000	155146	31.701	2.8486	26363.	8.4753	1458.8	7.8773	1.8519	28.964
154500	155653	31.699	2.7925	26381.	8.3085	1459.3	7.7248	1.8891	28.964
155000	156161	31.698	2.7391 - 3	26382.	8.1502 +20	1459.3	7.5776 + 6	1.9258 - 4	28.964
155500	156668	31.696	2.6868	26384.	7.9949	1459.3	7.4332	1.9632	28.964
156000	157176	31.694	2.6355	26385.	7.8426	1459.3	7.2916	2.0013	28.964
156500	157683	31.693	2.5851	26386.	7.6932	1459.3	7.1526	2.0402	28.964
157000	158191	31.691	2.5358	26388.	7.5466	1459.3	7.0164	2.0798	28.964
157500	158699	31.690	2.4873	26389.	7.4028	1459.3	6.8827	2.1202	28.964
158000	159206	31.688	2.4398	26390.	7.2618	1459.3	6.7515	2.1614	28.964
158500	159714	31.687	2.3932	26391.	7.1234	1459.3	6.6229	2.2034	28.964
159000	160222	31.685	2.3475	26393.	6.9877	1459.3	6.4967	2.2462	28.964
159500	160729	31.684	2.3027	26394.	6.8546	1459.3	6.3729	2.2898	28.964
160000	161237	31.682	2.2587 - 3	26395.	6.7239 +20	1459.3	6.2515 + 6	2.3343 - 4	28.964
160500	161745	31.681	2.2155	26396.	6.5958	1459.3	6.1324	2.3796	28.964
161000	162253	31.679	2.1732	26398.	6.4702	1459.3	6.0156	2.4258	28.964
161500	162761	31.678	2.1317	26399.	6.3469	1459.3	5.9009	2.4730	28.964
162000	163268	31.676	2.0910	26400.	6.2260	1459.3	5.7885	2.5210	28.964
162500	163776	31.675	2.0511	26402.	6.1073	1459.3	5.6782	2.5700	28.964
163000	164284	31.673	2.0119	26403.	5.9910	1459.3	5.5700	2.6199	28.964
163500	164792	31.671	1.9735	26404.	5.8768	1459.3	5.4639	2.6708	28.964
164000	165300	31.670	1.9358	26405.	5.7649	1459.3	5.3598	2.7226	28.964
164500	165808	31.668	1.8988	26407.	5.6550	1459.3	5.2577	2.7755	28.964
165000	166316	31.667	1.8625 - 3	26408.	5.5473 +20	1459.3	5.1575 + 6	2.8294 - 4	28.964
165500	166824	31.665	1.8269	26409.	5.4416	1459.3	5.0592	2.8844	28.964
166000	167332	31.664	1.7921	26410.	5.3379	1459.3	4.9629	2.9404	28.964
166500	167840	31.662	1.7578	26412.	5.2362	1459.3	4.8683	2.9975	28.964
167000	168348	31.661	1.7242	26413.	5.1364	1459.3	4.7755	3.0557	28.964
167500	168856	31.659	1.6913	26414.	5.0386	1459.3	4.6845	3.1151	28.964
168000	169364	31.658	1.6590	26416.	4.9426	1459.3	4.5953	3.1756	28.964
168500	169873	31.656	1.6273	26417.	4.8484	1459.3	4.5077	3.2373	28.964
169000	170381	31.655	1.5962	26418.	4.7560	1459.3	4.4219	3.3002	28.964
169500	170889	31.653	1.5658	26419.	4.6654	1459.3	4.3376	3.3643	28.964
170000	171397	31.652	1.5358 - 3	26421.	4.5765 +20	1459.3	4.2550 + 6	3.4296 - 4	28.964
170500	171906	31.650	1.5065	26422.	4.4893	1459.3	4.1739	3.4962	28.964
171000	172414	31.649	1.4790	26400.	4.4077	1458.6	4.0962	3.5610	28.964
171500	172922	31.647	1.4524	26371.	4.3285	1457.8	4.0203	3.6262	28.964
172000	173431	31.645	1.4262	26343.	4.2506	1457.0	3.9457	3.6926	28.964
172500	173939	31.644	1.4004	26314.	4.1740	1456.2	3.8724	3.7603	28.964
173000	174447	31.642	1.3751	26286.	4.0987	1455.3	3.8004	3.8294	28.964
173500	174956	31.641	1.3502	26257.	4.0247	1454.5	3.7297	3.8998	28.964
174000	175464	31.639	1.3257	26229.	3.9520	1453.7	3.6602	3.9716	28.964
174500	175973	31.638	1.3017	26200.	3.8805	1452.9	3.5920	4.0448	28.964
175000	176481	31.636	1.2780 - 3	26172.	3.8102 +20	1452.0	3.5249 + 6	4.1194 - 4	28.964
175500	176990	31.635	1.2548	26143.	3.7411	1451.2	3.4590	4.1955	28.964
176000	177498	31.633	1.2320	26115.	3.6732	1450.4	3.3943	4.2731	28.964
176500	178007	31.632	1.2095	26086.	3.6064	1449.6	3.3307	4.3522	28.964
177000	178515	31.630	1.1874	26058.	3.5408	1448.7	3.2682	4.4328	28.964
177500	179024	31.629	1.1658	26029.	3.4763	1447.9	3.2068	4.5151	28.964
178000	179533	31.627	1.1444	26001.	3.4129	1447.1	3.1465	4.5990	28.964
178500	180041	31.626	1.1235	25972.	3.3505	1446.2	3.0873	4.6845	28.964
179000	180550	31.624	1.1029	25944.	3.2893	1445.4	3.0291	4.7717	28.964
179500	181059	31.623	1.0827	25915.	3.2291	1444.6	2.9720	4.8607	28.964
180000	181567	31.621	1.0628 - 3	25887.	3.1699 +20	1443.8	2.9158 + 6	4.9514 - 4	28.964
180500	182076	31.619	1.0432	25858.	3.1118	1442.9	2.8607	5.0439	28.964
181000	182585	31.618	1.0240	25830.	3.0546	1442.1	2.8066	5.1383	28.964
181500	183094	31.616	1.0051	25801.	2.9985	1441.3	2.7534	5.2345	28.964
182000	183602	31.615	9.8660 - 4	25772.	2.9433	1440.4	2.7011	5.3327	28.964
182500	184111	31.613	9.6837	25744.	2.8891	1439.6	2.6498	5.4328	28.964
183000	184620	31.612	9.5046	25715.	2.8358	1438.8	2.5994	5.5349	28.964
183500	185129	31.610	9.3286	25687.	2.7834	1437.9	2.5500	5.6391	28.964
184000	185638	31.609	9.1557	25658.	2.7319	1437.1	2.5014	5.7453	28.964
184500	186147	31.607	8.9858	25630.	2.6813	1436.3	2.4536	5.8536	28.964
185000	186656	31.606	8.8188 - 4	25601.	2.6317 +20	1435.4	2.4068 + 6	5.9642 - 4	28.964
185500	187165	31.604	8.6548	25573.	2.5828	1434.6	2.3607	6.0769	28.964
186000	187674	31.603	8.4936	25544.	2.5348	1433.8	2.3155	6.1919	28.964
186500	188183	31.601	8.3352	25515.	2.4877	1432.9	2.2711	6.3093	28.964
187000	188692	31.600	8.1797	25487.	2.4414	1432.1	2.2275	6.4290	28.964
187500	189201	31.598	8.0268	25458.	2.3959	1431.2	2.1847	6.5511	28.964
188000	189710	31.597	7.8766	25430.	2.3512	1430.4	2.1427	6.6757	28.964
188500	190220	31.595	7.7291	25401.	2.3072	1429.6	2.1015	6.8028	28.964
189000	190729	31.593	7.5841	25373.	2.2641	1428.7	2.0609	6.9325	28.964
189500	191238	31.592	7.4418	25344.	2.2217	1427.9	2.0211	7.0648	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{v}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
150000	148929	31.716	3.5264 - 3	25929.	1.0487 +21	1447.1	9.6684 + 6	1.4967 - 4	28.964
150500	149422	31.715	3.4535	25971.	1.0270	1448.2	9.4764	1.5283	28.964
151000	149914	31.713	3.3822	26013.	1.0059	1449.4	9.2885	1.5604	28.964
151500	150407	31.712	3.3125	26055.	9.8518 +20	1450.5	9.1047	1.5932	28.964
152000	150900	31.710	3.2443	26098.	9.6495	1451.7	8.9247	1.6266	28.964
152500	151393	31.709	3.1776	26140.	9.4517	1452.8	8.7487	1.6606	28.964
153000	151886	31.707	3.1125	26182.	9.2583	1454.0	8.5763	1.6953	28.964
153500	152378	31.706	3.0487	26224.	9.0691	1455.1	8.4076	1.7307	28.964
154000	152871	31.704	2.9864	26267.	8.8841	1456.2	8.2425	1.7667	28.964
154500	153364	31.703	2.9254	26309.	8.7031	1457.4	8.0810	1.8035	28.964
155000	153856	31.701	2.8658 - 3	26351.	8.5261 +20	1458.5	7.9228 + 6	1.8409 - 4	28.964
155500	154349	31.700	2.8088	26381.	8.3569	1459.3	7.7698	1.8782	28.964
156000	154842	31.698	2.7559	26382.	8.2000	1459.3	7.6239	1.9141	28.964
156500	155334	31.696	2.7040	26383.	8.0461	1459.3	7.4808	1.9507	28.964
157000	155827	31.695	2.6532	26385.	7.8951	1459.3	7.3403	1.9880	28.964
157500	156319	31.693	2.6032	26386.	7.7468	1459.3	7.2025	2.0261	28.964
158000	156812	31.692	2.5542	26387.	7.6014	1459.3	7.0673	2.0648	28.964
158500	157304	31.690	2.5062	26388.	7.4588	1459.3	6.9347	2.1043	28.964
159000	157797	31.689	2.4590	26390.	7.3188	1459.3	6.8045	2.1446	28.964
159500	158289	31.687	2.4128	26391.	7.1814	1459.3	6.6768	2.1856	28.964
160000	158782	31.686	2.3674 - 3	26392.	7.0466 +20	1459.3	6.5515 + 6	2.2274 - 4	28.964
160500	159274	31.684	2.3228	26393.	6.9144	1459.3	6.4286	2.2700	28.964
161000	159766	31.683	2.2791	26395.	6.7846	1459.3	6.3079	2.3134	28.964
161500	160259	31.681	2.2363	26396.	6.6573	1459.3	6.1896	2.3577	28.964
162000	160751	31.680	2.1942	26397.	6.5324	1459.3	6.0734	2.4027	28.964
162500	161243	31.678	2.1529	26398.	6.4098	1459.3	5.9595	2.4487	28.964
163000	161736	31.677	2.1124	26400.	6.2896	1459.3	5.8477	2.4955	28.964
163500	162228	31.675	2.0727	26401.	6.1716	1459.3	5.7380	2.5432	28.964
164000	162720	31.674	2.0337	26402.	6.0558	1459.3	5.6303	2.5918	28.964
164500	163212	31.672	1.9955	26403.	5.9422	1459.3	5.5247	2.6414	28.964
165000	163705	31.671	1.9579 - 3	26405.	5.8307 +20	1459.3	5.4211 + 6	2.6919 - 4	28.964
165500	164197	31.669	1.9211	26406.	5.7214	1459.3	5.3194	2.7433	28.964
166000	164689	31.668	1.8850	26407.	5.6141	1459.3	5.2196	2.7958	28.964
166500	165181	31.666	1.8496	26408.	5.5088	1459.3	5.1217	2.8492	28.964
167000	165673	31.665	1.8148	26410.	5.4054	1459.3	5.0256	2.9037	28.964
167500	166165	31.663	1.7807	26411.	5.3041	1459.3	4.9314	2.9592	28.964
168000	166657	31.662	1.7472	26412.	5.2046	1459.3	4.8389	3.0157	28.964
168500	167149	31.660	1.7143	26413.	5.1070	1459.3	4.7482	3.0734	28.964
169000	167641	31.659	1.6821	26415.	5.0112	1459.3	4.6591	3.1321	28.964
169500	168133	31.657	1.6505	26416.	4.9173	1459.3	4.5718	3.1919	28.964
170000	168625	31.656	1.6195 - 3	26417.	4.8251 +20	1459.3	4.4861 + 6	3.2529 - 4	28.964
170500	169117	31.654	1.5890	26418.	4.7346	1459.3	4.4020	3.3151	28.964
171000	169609	31.653	1.5592	26420.	4.6459	1459.3	4.3194	3.3784	28.964
171500	170101	31.651	1.5299	26421.	4.5588	1459.3	4.2385	3.4430	28.964
172000	170593	31.650	1.5011	26422.	4.4733	1459.3	4.1590	3.5087	28.964
172500	171085	31.648	1.4745	26395.	4.3942	1458.5	4.0832	3.5719	28.964
173000	171577	31.647	1.4483	26367.	4.3165	1457.7	4.0088	3.6362	28.964
173500	172068	31.645	1.4226	26339.	4.2400	1456.9	3.9356	3.7018	28.964
174000	172560	31.644	1.3974	26311.	4.1649	1456.1	3.8637	3.7686	28.964
174500	173052	31.642	1.3725	26283.	4.0910	1455.3	3.7931	3.8366	28.964
175000	173544	31.641	1.3481 - 3	26255.	4.0183 +20	1454.4	3.7236 + 6	3.9060 - 4	28.964
175500	174035	31.639	1.3240	26227.	3.9469	1453.6	3.6554	3.9767	28.964
176000	174527	31.638	1.3004	26199.	3.8767	1452.8	3.5883	4.0488	28.964
176500	175019	31.636	1.2772	26171.	3.8076	1452.0	3.5224	4.1222	28.964
177000	175510	31.635	1.2543	26143.	3.7397	1451.2	3.4577	4.1971	28.964
177500	176002	31.633	1.2319	26115.	3.6729	1450.4	3.3940	4.2734	28.964
178000	176493	31.632	1.2098	26087.	3.6073	1449.6	3.3315	4.3511	28.964
178500	176985	31.630	1.1881	26059.	3.5427	1448.8	3.2700	4.4304	28.964
179000	177477	31.629	1.1668	26031.	3.4793	1447.9	3.2097	4.5112	28.964
179500	177968	31.627	1.1458	26002.	3.4169	1447.1	3.1503	4.5936	28.964
180000	178460	31.626	1.1252 - 3	25974.	3.3555 +20	1446.3	3.0920 + 6	4.6775 - 4	28.964
180500	178951	31.624	1.1049	25946.	3.2952	1445.5	3.0348	4.7631	28.964
181000	179442	31.623	1.0850	25918.	3.2360	1444.7	2.9785	4.8504	28.964
181500	179934	31.621	1.0654	25890.	3.1777	1443.9	2.9232	4.9393	28.964
182000	180425	31.620	1.0461	25862.	3.1204	1443.1	2.8689	5.0300	28.964
182500	180917	31.618	1.0272	25834.	3.0641	1442.2	2.8155	5.1224	28.964
183000	181408	31.617	1.0086	25806.	3.0087	1441.4	2.7631	5.2167	28.964
183500	181899	31.615	9.9031 - 4	25778.	2.9543	1440.6	2.7116	5.3128	28.964
184000	182391	31.614	9.7234	25750.	2.9008	1439.8	2.6610	5.4107	28.964
184500	182882	31.612	9.5467	25722.	2.8483	1439.0	2.6113	5.5106	28.964
185000	183373	31.611	9.3730 - 4	25694.	2.7966 +20	1438.1	2.5624 + 6	5.6124 - 4	28.964
185500	183864	31.609	9.2023	25666.	2.7458	1437.3	2.5145	5.7163	28.964
186000	184356	31.608	9.0346	25638.	2.6959	1436.5	2.4673	5.8221	28.964
186500	184847	31.606	8.8697	25610.	2.6468	1435.7	2.4210	5.9301	28.964
187000	185338	31.605	8.7076	25582.	2.5986	1434.9	2.3756	6.0401	28.964
187500	185829	31.603	8.5484	25554.	2.5512	1434.0	2.3309	6.1524	28.964
188000	186320	31.602	8.3919	25526.	2.5046	1433.2	2.2870	6.2668	28.964
188500	186811	31.600	8.2381	25498.	2.4588	1432.4	2.2439	6.3835	28.964
189000	187302	31.599	8.0869	25470.	2.4138	1431.6	2.2016	6.5025	28.964
189500	187793	31.597	7.9383	25442.	2.3695	1430.8	2.1600	6.6239	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
H, ft	Z, ft								
190000	191747	31.590	7.3019 - 4	25315.	2.1800 +20	1427.1	1.9821 + 6	7.1997 - 4	28.964
190500	192256	31.589	7.1645	25287.	2.1391	1426.2	1.9437	7.3375	28.964
191000	192766	31.587	7.0295	25258.	2.0989	1425.4	1.9061	7.4780	28.964
191500	193275	31.586	6.8969	25230.	2.0594	1424.5	1.8691	7.6214	28.964
192000	193784	31.584	6.7666	25201.	2.0206	1423.7	1.8328	7.7677	28.964
192500	194294	31.583	6.6387	25172.	1.9825	1422.8	1.7972	7.9170	28.964
193000	194803	31.581	6.5131	25144.	1.9451	1422.0	1.7622	8.0694	28.964
193500	195312	31.580	6.3896	25115.	1.9083	1421.2	1.7279	8.2249	28.964
194000	195822	31.578	6.2684	25087.	1.8722	1420.3	1.6942	8.3835	28.964
194500	196331	31.577	6.1493	25058.	1.8367	1419.5	1.6611	8.5454	28.964
195000	196841	31.575	6.0324 - 4	25029.	1.8019 +20	1418.6	1.6286 + 6	8.7107 - 4	28.964
195500	197350	31.574	5.9175	25001.	1.7677	1417.8	1.5967	8.8793	28.964
196000	197860	31.572	5.8047	24972.	1.7340	1416.9	1.5654	9.0514	28.964
196500	198369	31.571	5.6939	24944.	1.7010	1416.1	1.5347	9.2271	28.964
197000	198879	31.569	5.5851	24915.	1.6686	1415.2	1.5046	9.4064	28.964
197500	199388	31.567	5.4783	24886.	1.6368	1414.4	1.4750	9.5894	28.964
198000	199898	31.566	5.3734	24858.	1.6055	1413.5	1.4459	9.7762	28.964
198500	200408	31.564	5.2703	24829.	1.5748	1412.7	1.4174	9.9668	28.964
199000	200917	31.563	5.1691	24800.	1.5446	1411.8	1.3894	1.0161 - 3	28.964
199500	201427	31.561	5.0698	24772.	1.5150	1411.0	1.3620	1.0360	28.964
200000	201937	31.560	4.9722 - 4	24743.	1.4859 +20	1410.1	1.3350 + 6	1.0563 - 3	28.964
200500	202447	31.558	4.8807	24692.	1.4587	1408.7	1.3091	1.0760	28.964
201000	202956	31.557	4.7922	24634.	1.4323	1407.0	1.2839	1.0958	28.964
201500	203466	31.555	4.7052	24575.	1.4063	1405.3	1.2591	1.1161	28.964
202000	203976	31.554	4.6194	24517.	1.3808	1403.6	1.2347	1.1367	28.964
202500	204486	31.552	4.5351	24458.	1.3556	1401.8	1.2108	1.1578	28.964
203000	204996	31.551	4.4520	24400.	1.3309	1400.1	1.1872	1.1794	28.964
203500	205506	31.549	4.3704	24341.	1.3065	1398.4	1.1640	1.2013	28.964
204000	206015	31.548	4.2900	24283.	1.2825	1396.7	1.1413	1.2238	28.964
204500	206525	31.546	4.2109	24224.	1.2589	1395.0	1.1189	1.2467	28.964
205000	207035	31.545	4.1330 - 4	24166.	1.2357 +20	1393.3	1.0969 + 6	1.2701 - 3	28.964
205500	207545	31.543	4.0564	24107.	1.2129	1391.5	1.0753	1.2941	28.964
206000	208055	31.541	3.9811	24049.	1.1904	1389.8	1.0541	1.3185	28.964
206500	208565	31.540	3.9069	23990.	1.1683	1388.1	1.0332	1.3434	28.964
207000	209075	31.538	3.8340	23932.	1.1466	1386.4	1.0127	1.3689	28.964
207500	209586	31.537	3.7623	23873.	1.1252	1384.6	9.9259 + 5	1.3950	28.964
208000	210096	31.535	3.6917	23814.	1.1041	1382.9	9.7279	1.4216	28.964
208500	210606	31.534	3.6223	23756.	1.0834	1381.2	9.5335	1.4487	28.964
209000	211116	31.532	3.5540	23697.	1.0630	1379.4	9.3424	1.4765	28.964
209500	211626	31.531	3.4868	23639.	1.0430	1377.7	9.1547	1.5049	28.964
210000	212136	31.529	3.4207 - 4	23580.	1.0233 +20	1375.9	8.9704 + 5	1.5339 - 3	28.964
210500	212647	31.528	3.3558	23522.	1.0039	1374.2	8.7893	1.5635	28.964
211000	213157	31.526	3.2919	23463.	9.8481 +19	1372.5	8.6114	1.5938	28.964
211500	213667	31.525	3.2290	23404.	9.6606	1370.7	8.4366	1.6247	28.964
212000	214177	31.523	3.1672	23346.	9.4762	1369.0	8.2650	1.6563	28.964
212500	214688	31.522	3.1065	23287.	9.2948	1367.2	8.0964	1.6886	28.964
213000	215198	31.520	3.0467	23228.	9.1165	1365.4	7.9309	1.7217	28.964
213500	215709	31.519	2.9880	23170.	8.9411	1363.7	7.7683	1.7555	28.964
214000	216219	31.517	2.9302	23111.	8.7686	1361.9	7.6086	1.7900	28.964
214500	216729	31.516	2.8734	23053.	8.5991	1360.2	7.4519	1.8253	28.964
215000	217240	31.514	2.8175 - 4	22994.	8.4324 +19	1358.4	7.2979 + 5	1.8614 - 3	28.964
215500	217750	31.512	2.7627	22935.	8.2685	1356.6	7.1468	1.8982	28.964
216000	218261	31.511	2.7087	22877.	8.1074	1354.9	6.9984	1.9360	28.964
216500	218771	31.509	2.6556	22818.	7.9490	1353.1	6.8527	1.9745	28.964
217000	219282	31.508	2.6035	22759.	7.7933	1351.3	6.7097	2.0140	28.964
217500	219793	31.506	2.5523	22701.	7.6403	1349.5	6.5693	2.0543	28.964
218000	220303	31.505	2.5019	22642.	7.4898	1347.8	6.4314	2.0956	28.964
218500	220814	31.503	2.4524	22583.	7.3420	1346.0	6.2961	2.1378	28.964
219000	221324	31.502	2.4037	22524.	7.1967	1344.2	6.1634	2.1810	28.964
219500	221835	31.500	2.3559	22466.	7.0539	1342.4	6.0330	2.2251	28.964
220000	222346	31.499	2.3089 - 4	22407.	6.9135 +19	1340.6	5.9051 + 5	2.2703 - 3	28.964
220500	222857	31.497	2.2627	22348.	6.7756	1338.8	5.7796	2.3165	28.964
221000	223367	31.496	2.2174	22290.	6.6401	1337.0	5.6564	2.3638	28.964
221500	223878	31.494	2.1728	22231.	6.5069	1335.3	5.5355	2.4122	28.964
222000	224389	31.493	2.1290	22172.	6.3761	1333.5	5.4169	2.4617	28.964
222500	224900	31.491	2.0860	22113.	6.2475	1331.7	5.3005	2.5123	28.964
223000	225411	31.490	2.0437	22055.	6.1212	1329.9	5.1863	2.5642	28.964
223500	225921	31.488	2.0022	21996.	5.9971	1328.0	5.0743	2.6172	28.964
224000	226432	31.487	1.9614	21937.	5.8752	1326.2	4.9644	2.6715	28.964
224500	226943	31.485	1.9213	21878.	5.7555	1324.4	4.8566	2.7271	28.964
225000	227454	31.483	1.8820 - 4	21820.	5.6379 +19	1322.6	4.7508 + 5	2.7840 - 3	28.964
225500	227965	31.482	1.8433	21761.	5.5223	1320.8	4.6471	2.8422	28.964
226000	228476	31.480	1.8054	21702.	5.4089	1319.0	4.5453	2.9018	28.964
226500	228987	31.479	1.7681	21643.	5.2974	1317.2	4.4456	2.9629	28.964
227000	229498	31.477	1.7315	21585.	5.1880	1315.3	4.3477	3.0254	28.964
227500	230009	31.476	1.6955	21526.	5.0805	1313.5	4.2517	3.0894	28.964
228000	230521	31.474	1.6602	21467.	4.9750	1311.7	4.1576	3.1549	28.964
228500	231032	31.473	1.6255	21408.	4.8713	1309.9	4.0653	3.2221	28.964
229000	231543	31.471	1.5915	21349.	4.7696	1308.0	3.9748	3.2908	28.964
229500	232054	31.470	1.5581	21290.	4.6697	1306.2	3.8861	3.3612	28.964

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g, \text{ft sec}^{-2}$	Specific weight $\omega, \text{lb ft}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{ft}$	Number density $n, \text{ft}^{-3}$	Particle speed $\bar{V}, \text{ft sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{ft}$	Molecular weight $M$
Z, ft	H, ft								
190000	188284	31.596	7.7924 - 4	25413.	2.3261 +20	1429.9	2.1192 + 6	6.7477 - 4	28.964
190500	188775	31.594	7.6489	25385.	2.2834	1429.1	2.0790	6.8739	28.964
191000	189266	31.593	7.5080	25357.	2.2414	1428.3	2.0396	7.0026	28.964
191500	189757	31.591	7.3694	25329.	2.2002	1427.5	2.0010	7.1339	28.964
192000	190248	31.590	7.2333	25301.	2.1596	1426.6	1.9630	7.2678	28.964
192500	190739	31.588	7.0996	25273.	2.1198	1425.8	1.9256	7.4043	28.964
193000	191230	31.587	6.9682	25245.	2.0806	1425.0	1.8890	7.5436	28.964
193500	191721	31.585	6.8391	25217.	2.0422	1424.2	1.8530	7.6857	28.964
194000	192212	31.584	6.7122	25189.	2.0044	1423.3	1.8177	7.8306	28.964
194500	192703	31.582	6.5875	25161.	1.9673	1422.5	1.7829	7.9784	28.964
195000	193193	31.581	6.4651 - 4	25133.	1.9308 +20	1421.7	1.7489 + 6	8.1291 - 4	28.964
195500	193684	31.579	6.3447	25105.	1.8949	1420.8	1.7154	8.2829	28.964
196000	194175	31.578	6.2265	25077.	1.8597	1420.0	1.6825	8.4398	28.964
196500	194666	31.576	6.1104	25049.	1.8251	1419.2	1.6503	8.5998	28.964
197000	195156	31.575	5.9963	25020.	1.7911	1418.4	1.6186	8.7630	28.964
197500	195647	31.573	5.8842	24992.	1.7577	1417.5	1.5875	8.9296	28.964
198000	196138	31.572	5.7740	24964.	1.7249	1416.7	1.5569	9.0994	28.964
198500	196628	31.570	5.6658	24936.	1.6927	1415.9	1.5269	9.2727	28.964
199000	197119	31.569	5.5596	24908.	1.6610	1415.0	1.4975	9.4495	28.964
199500	197609	31.567	5.4552	24880.	1.6299	1414.2	1.4686	9.6299	28.964
200000	198100	31.566	5.3526 - 4	24852.	1.5993 +20	1413.4	1.4402 + 6	9.8140 - 4	28.964
200500	198591	31.564	5.2519	24824.	1.5693	1412.5	1.4123	1.0002 - 3	28.964
201000	199081	31.563	5.1529	24796.	1.5398	1411.7	1.3849	1.0193	28.964
201500	199572	31.561	5.0557	24768.	1.5108	1410.9	1.3581	1.0389	28.964
202000	200062	31.560	4.9603	24740.	1.4824	1410.0	1.3317	1.0588	28.964
202500	200552	31.558	4.8714	24686.	1.4559	1408.5	1.3065	1.0781	28.964
203000	201043	31.557	4.7847	24629.	1.4300	1406.8	1.2818	1.0976	28.964
203500	201533	31.555	4.6994	24572.	1.4046	1405.1	1.2575	1.1174	28.964
204000	202024	31.554	4.6154	24514.	1.3796	1403.5	1.2336	1.1377	28.964
204500	202514	31.552	4.5327	24457.	1.3549	1401.8	1.2101	1.1584	28.964
205000	203004	31.551	4.4513 - 4	24399.	1.3307 +20	1400.1	1.1870 + 6	1.1795 - 3	28.964
205500	203495	31.549	4.3712	24342.	1.3068	1398.4	1.1643	1.2011	28.964
206000	203985	31.548	4.2924	24285.	1.2833	1396.8	1.1420	1.2231	28.964
206500	204475	31.546	4.2148	24227.	1.2601	1395.1	1.1200	1.2456	28.964
207000	204965	31.545	4.1384	24170.	1.2373	1393.4	1.0984	1.2685	28.964
207500	205456	31.543	4.0632	24112.	1.2149	1391.7	1.0772	1.2919	28.964
208000	205946	31.542	3.9892	24055.	1.1928	1390.0	1.0564	1.3158	28.964
208500	206436	31.540	3.9164	23998.	1.1711	1388.3	1.0359	1.3402	28.964
209000	206926	31.539	3.8447	23940.	1.1498	1386.6	1.0157	1.3651	28.964
209500	207416	31.537	3.7742	23883.	1.1287	1384.9	9.9594 + 5	1.3906	28.964
210000	207906	31.536	3.7048 - 4	23825.	1.1080 +20	1383.2	9.7648 + 5	1.4165 - 3	28.964
210500	208396	31.534	3.6366	23768.	1.0877	1381.5	9.5735	1.4431	28.964
211000	208886	31.533	3.5694	23711.	1.0676	1379.8	9.3856	1.4701	28.964
211500	209376	31.531	3.5033	23653.	1.0479	1378.1	9.2009	1.4978	28.964
212000	209866	31.530	3.4383	23596.	1.0285	1376.4	9.0193	1.5261	28.964
212500	210356	31.528	3.3743	23538.	1.0094	1374.7	8.8410	1.5549	28.964
213000	210846	31.527	3.3114	23481.	9.9064 +19	1373.0	8.6657	1.5844	28.964
213500	211336	31.525	3.2495	23424.	9.7217	1371.3	8.4935	1.6145	28.964
214000	211826	31.524	3.1886	23366.	9.5400	1369.6	8.3243	1.6453	28.964
214500	212316	31.522	3.1287	23309.	9.3612	1367.8	8.1581	1.6767	28.964
215000	212806	31.521	3.0698 - 4	23251.	9.1853 +19	1366.1	7.9948 + 5	1.7088 - 3	28.964
215500	213296	31.519	3.0118	23194.	9.0124	1364.4	7.8344	1.7416	28.964
216000	213785	31.518	2.9548	23136.	8.8423	1362.7	7.6768	1.7751	28.964
216500	214275	31.516	2.8988	23079.	8.6749	1361.0	7.5220	1.8093	28.964
217000	214765	31.515	2.8437	23021.	8.5104	1359.2	7.3699	1.8443	28.964
217500	215255	31.513	2.7895	22964.	8.3485	1357.5	7.2206	1.8800	28.964
218000	215745	31.512	2.7362	22907.	8.1894	1355.8	7.0739	1.9166	28.964
218500	216234	31.510	2.6837	22849.	8.0329	1354.0	6.9298	1.9539	28.964
219000	216724	31.509	2.6322	22792.	7.8790	1352.3	6.7883	1.9921	28.964
219500	217214	31.507	2.5815	22734.	7.7276	1350.6	6.6494	2.0311	28.964
220000	217703	31.506	2.5317 - 4	22677.	7.5788 +19	1348.8	6.5130 + 5	2.0710 - 3	28.964
220500	218193	31.504	2.4827	22619.	7.4325	1347.1	6.3790	2.1117	28.964
221000	218682	31.503	2.4345	22562.	7.2887	1345.3	6.2474	2.1534	28.964
221500	219172	31.501	2.3872	22504.	7.1473	1343.6	6.1183	2.1960	28.964
222000	219661	31.500	2.3406	22447.	7.0083	1341.8	5.9915	2.2396	28.964
222500	220151	31.498	2.2949	22389.	6.8716	1340.1	5.8670	2.2841	28.964
223000	220640	31.497	2.2499	22332.	6.7373	1338.3	5.7448	2.3297	28.964
223500	221130	31.495	2.2057	22274.	6.6053	1336.6	5.6248	2.3762	28.964
224000	221619	31.494	2.1623	22217.	6.4755	1334.8	5.5070	2.4239	28.964
224500	222109	31.492	2.1196	22159.	6.3479	1333.1	5.3914	2.4726	28.964
225000	222598	31.491	2.0776 - 4	22102.	6.2225 +19	1331.3	5.2779 + 5	2.5224 - 3	28.964
225500	223087	31.489	2.0364	22044.	6.0993	1329.5	5.1666	2.5733	28.964
226000	223577	31.488	1.9959	21987.	5.9782	1327.8	5.0573	2.6255	28.964
226500	224066	31.486	1.9561	21929.	5.8592	1326.0	4.9500	2.6788	28.964
227000	224555	31.485	1.9169	21872.	5.7423	1324.2	4.8448	2.7333	28.964
227500	225045	31.483	1.8785	21814.	5.6274	1322.5	4.7415	2.7891	28.964
228000	225534	31.482	1.8407	21757.	5.5145	1320.7	4.6401	2.8462	28.964
228500	226023	31.480	1.8036	21699.	5.4036	1318.9	4.5407	2.9046	28.964
229000	226512	31.479	1.7672	21642.	5.2947	1317.1	4.4431	2.9644	28.964
229500	227002	31.477	1.7313	21584.	5.1876	1315.3	4.3474	3.0256	28.964

TABLE V.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$H$ , ft	$Z$ , ft								
230000	232565	31.468	1.5253 - 4	21232.	4.5716 +19	1304.4	3.7991 + 5	3.4333 - 3	28.964
230500	233076	31.467	1.4931	21173.	4.4753	1302.5	3.7139	3.5072	28.964
231000	233588	31.465	1.4615	21114.	4.3807	1300.7	3.6303	3.5829	28.964
231500	234099	31.464	1.4305	21055.	4.2880	1298.8	3.5483	3.6604	28.964
232000	234610	31.462	1.4000	20996.	4.1969	1297.0	3.4680	3.7399	28.964
232500	235122	31.461	1.3701	20937.	4.1075	1295.1	3.3893	3.8213	28.964
233000	235633	31.459	1.3408	20879.	4.0197	1293.3	3.3122	3.9047	28.964
233500	236144	31.458	1.3120	20820.	3.9336	1291.4	3.2365	3.9901	28.964
234000	236656	31.456	1.2837	20761.	3.8491	1289.6	3.1625	4.0777	28.964
234500	237167	31.454	1.2560	20702.	3.7662	1287.7	3.0899	4.1675	28.964
235000	237679	31.453	1.2288 - 4	20643.	3.6848 +19	1285.8	3.0187 + 5	4.2596 - 3	28.964
235500	238190	31.451	1.2021	20584.	3.6049	1284.0	2.9490	4.3539	28.964
236000	238702	31.450	1.1760	20525.	3.5266	1282.1	2.8807	4.4506	28.964
236500	239213	31.448	1.1503	20466.	3.4497	1280.2	2.8138	4.5498	28.964
237000	239725	31.447	1.1251	20408.	3.3743	1278.4	2.7483	4.6515	28.964
237500	240236	31.445	1.1004	20349.	3.3004	1276.5	2.6841	4.7557	28.964
238000	240748	31.444	1.0761	20290.	3.2278	1274.6	2.6212	4.8626	28.964
238500	241259	31.442	1.0523	20231.	3.1566	1272.7	2.5596	4.9723	28.964
239000	241771	31.441	1.0290	20172.	3.0868	1270.8	2.4993	5.0847	28.964
239500	242283	31.439	1.0061	20113.	3.0184	1268.9	2.4403	5.2000	28.964
240000	242794	31.438	9.8372 - 5	20054.	2.9512 +19	1267.1	2.3824 + 5	5.3183 - 3	28.964
240500	243306	31.436	9.6173	19995.	2.8854	1265.2	2.3258	5.4397	28.964
241000	243818	31.435	9.4016	19936.	2.8208	1263.3	2.2703	5.5642	28.964
241500	244330	31.433	9.1902	19877.	2.7575	1261.4	2.2161	5.6919	28.964
242000	244842	31.432	8.9828	19818.	2.6954	1259.5	2.1629	5.8230	28.964
242500	245353	31.430	8.7796	19759.	2.6346	1257.6	2.1109	5.9575	28.964
243000	245865	31.429	8.5804	19700.	2.5749	1255.6	2.0599	6.0956	28.964
243500	246377	31.427	8.3851	19641.	2.5164	1253.7	2.0101	6.2372	28.964
244000	246889	31.425	8.1937	19582.	2.4591	1251.8	1.9613	6.3826	28.964
244500	247401	31.424	8.0060	19523.	2.4029	1249.9	1.9135	6.5319	28.964
245000	247913	31.422	7.8222 - 5	19464.	2.3478 +19	1248.0	1.8668 + 5	6.6851 - 3	28.964
245500	248425	31.421	7.6420	19405.	2.2939	1246.1	1.8211	6.8424	28.964
246000	248937	31.42	7.465	19346.	2.241	1244.	1.776	7.004	28.964
246500	249449	31.42	7.292	19287.	2.189	1242.	1.733	7.170	28.964
247000	249961	31.42	7.123	19228.	2.138	1240.	1.690	7.340	28.964
247500	250473	31.41	6.957	19169.	2.089	1238.	1.648	7.515	28.964
248000	250985	31.41	6.794	19110.	2.040	1236.	1.607	7.695	28.964
248500	251497	31.41	6.634	19051.	1.992	1234.	1.567	7.879	28.964
249000	252009	31.41	6.478	18992.	1.945	1233.	1.528	8.069	28.964
249500	252521	31.41	6.325	18933.	1.899	1231.	1.489	8.263	28.964
250000	253034	31.41	6.176 - 5	18874.	1.855 +19	1229.	1.452 + 5	8.464 - 3	28.964
250500	253546	31.41	6.029	18815.	1.811	1227.	1.415	8.669	28.964
251000	254058	31.40	5.885	18756.	1.767	1225.	1.379	8.880	28.964
251500	254570	31.40	5.744	18697.	1.725	1223.	1.344	9.097	28.964
252000	255083	31.40	5.607	18638.	1.684	1221.	1.310	9.321	28.964
252500	255595	31.40	5.472	18579.	1.644	1219.	1.276	9.550	28.964
253000	256107	31.40	5.340	18520.	1.604	1217.	1.244	9.786	28.964
253500	256620	31.40	5.210	18461.	1.565	1215.	1.211	1.003 - 2	28.964
254000	257132	31.39	5.084	18401.	1.527	1213.	1.180	1.028	28.964
254500	257645	31.39	4.960	18342.	1.490	1211.	1.150	1.053	28.964
255000	258157	31.39	4.839 - 5	18283.	1.454 +19	1209.	1.120 + 5	1.080 - 2	28.964
255500	258669	31.39	4.720	18224.	1.418	1207.	1.091	1.107	28.964
256000	259182	31.39	4.604	18165.	1.383	1205.	1.062	1.135	28.964
256500	259694	31.39	4.490	18106.	1.349	1203.	1.034	1.163	28.964
257000	260207	31.39	4.379	18047.	1.316	1201.	1.007	1.193	28.964
257500	260720	31.38	4.270	17988.	1.283	1199.	9.802 + 4	1.223	28.964
258000	261232	31.38	4.164	17928.	1.251	1197.	9.542	1.254	28.964
258500	261745	31.38	4.059	17869.	1.220	1195.	9.289	1.287	28.964
259000	262257	31.38	3.957	17810.	1.189	1193.	9.041	1.320	28.964
259500	262770	31.38	3.850	17751.	1.157	1192.	8.789	1.356	28.964
260000	263283	31.38	3.740 - 5	17789.	1.124 +19	1192.	8.540 + 4	1.396 - 2	28.964
260500	263796	31.38	3.634	17790.	1.092	1192.	8.297	1.437	28.964
261000	264308	31.37	3.530	17791.	1.061	1192.	8.061	1.479	28.964
261500	264821	31.37	3.430	17792.	1.031	1192.	7.832	1.522	28.964
262000	265334	31.37	3.332	17793.	1.002	1192.	7.610	1.567	28.964
262500	265847	31.37	3.237	17794.	9.734 +18	1192.	7.394	1.612	28.964
263000	266359	31.37	3.145	17795.	9.457	1192.	7.184	1.660	28.964
263500	266872	31.37	3.056	17796.	9.189	1192.	6.979	1.708	28.964
264000	267385	31.36	2.969	17796.	8.928	1192.	6.781	1.758	28.964
264500	267898	31.36	2.884	17797.	8.674	1192.	6.589	1.810	28.964
265000	268411	31.36	2.802 - 5	17798.	8.427 +18	1192.	6.401 + 4	1.862 - 2	28.964
265500	268924	31.36	2.723	17799.	8.188	1192.	6.220	1.917	28.964
266000	269437	31.36	2.645	17800.	7.955	1192.	6.043	1.973	28.964
266500	269950	31.36	2.570	17801.	7.729	1192.	5.871	2.031	28.964
267000	270463	31.36	2.497	17802.	7.510	1192.	5.704	2.090	28.964
267500	270976	31.35	2.426	17802.	7.297	1192.	5.542	2.151	28.964
268000	271489	31.35	2.357	17803.	7.089	1192.	5.385	2.214	28.964
268500	272002	31.35	2.290	17804.	6.888	1192.	5.232	2.279	28.964
269000	272516	31.35	2.224	17805.	6.692	1192.	5.083	2.345	28.964
269500	273029	31.35	2.161	17806.	6.502	1192.	4.939	2.414	28.964



## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
230000	227491	31.476	1.6962 - 4	21527.	5.0825 +19	1313.6	4.2535 + 5	3.0882 - 3	28.964
230500	227980	31.474	1.6616	21469.	4.9792	1311.8	4.1613	3.1523	28.964
231000	228469	31.473	1.6277	21412.	4.8777	1310.0	4.0710	3.2179	28.964
231500	228958	31.471	1.5943	21354.	4.7780	1308.2	3.9823	3.2850	28.964
232000	229447	31.470	1.5616	21297.	4.6801	1306.4	3.8954	3.3537	28.964
232500	229936	31.468	1.5294	21239.	4.5840	1304.6	3.8101	3.4240	28.964
233000	230425	31.467	1.4979	21182.	4.4896	1302.8	3.7265	3.4960	28.964
233500	230914	31.465	1.4669	21124.	4.3968	1301.0	3.6445	3.5698	28.964
234000	231403	31.464	1.4364	21067.	4.3058	1299.2	3.5641	3.6453	28.964
234500	231892	31.462	1.4065	21009.	4.2164	1297.4	3.4852	3.7226	28.964
235000	232381	31.461	1.3772 - 4	20951.	4.1286 +19	1295.6	3.4079 + 5	3.8017 - 3	28.964
235500	232870	31.459	1.3484	20894.	4.0424	1293.8	3.3321	3.8828	28.964
236000	233359	31.458	1.3201	20836.	3.9577	1292.0	3.2577	3.9658	28.964
236500	233848	31.456	1.2923	20779.	3.8747	1290.1	3.1849	4.0508	28.964
237000	234337	31.455	1.2650	20721.	3.7931	1288.3	3.1134	4.1380	28.964
237500	234825	31.453	1.2383	20664.	3.7130	1286.5	3.0434	4.2272	28.964
238000	235314	31.452	1.2120	20606.	3.6344	1284.7	2.9747	4.3186	28.964
238500	235803	31.450	1.1862	20549.	3.5573	1282.8	2.9075	4.4122	28.964
239000	236292	31.449	1.1609	20491.	3.4816	1281.0	2.8415	4.5082	28.964
239500	236780	31.447	1.1361	20433.	3.4073	1279.2	2.7769	4.6065	28.964
240000	237269	31.446	1.1117 - 4	20376.	3.3344 +19	1277.4	2.7136 + 5	4.7073 - 3	28.964
240500	237758	31.445	1.0878	20318.	3.2628	1275.5	2.6515	4.8105	28.964
241000	238246	31.443	1.0643	20261.	3.1926	1273.7	2.5907	4.9163	28.964
241500	238735	31.442	1.0413	20203.	3.1237	1271.8	2.5311	5.0248	28.964
242000	239224	31.440	1.0187	20146.	3.0560	1270.0	2.4728	5.1359	28.964
242500	239712	31.439	9.9657 - 5	20088.	2.9897	1268.1	2.4156	5.2499	28.964
243000	240201	31.437	9.7483	20030.	2.9246	1266.3	2.3595	5.3667	28.964
243500	240689	31.436	9.5351	19973.	2.8608	1264.4	2.3047	5.4865	28.964
244000	241178	31.434	9.3259	19915.	2.7982	1262.6	2.2509	5.6093	28.964
244500	241666	31.433	9.1207	19858.	2.7367	1260.7	2.1982	5.7352	28.964
245000	242155	31.431	8.9195 - 5	19800.	2.6765 +19	1258.9	2.1467 + 5	5.8643 - 3	28.964
245500	242643	31.430	8.7221	19742.	2.6174	1257.0	2.0962	5.9967	28.964
246000	243132	31.43	8.529	19685.	2.559	1255.	2.047	6.133	28.964
246500	243620	31.43	8.339	19627.	2.503	1253.	1.998	6.272	28.964
247000	244108	31.43	8.153	19569.	2.447	1251.	1.951	6.415	28.964
247500	244597	31.42	7.970	19512.	2.392	1250.	1.904	6.561	28.964
248000	245085	31.42	7.791	19454.	2.339	1248.	1.859	6.712	28.964
248500	245573	31.42	7.616	19397.	2.286	1246.	1.814	6.866	28.964
249000	246062	31.42	7.444	19339.	2.235	1244.	1.771	7.024	28.964
249500	246550	31.42	7.275	19281.	2.184	1242.	1.728	7.187	28.964
250000	247038	31.42	7.110 - 5	19224.	2.135 +19	1240.	1.686 + 5	7.353 - 3	28.964
250500	247526	31.41	6.948	19166.	2.086	1238.	1.646	7.524	28.964
251000	248015	31.41	6.789	19108.	2.038	1236.	1.606	7.700	28.964
251500	248503	31.41	6.634	19051.	1.992	1234.	1.567	7.880	28.964
252000	248991	31.41	6.481	18993.	1.946	1233.	1.528	8.065	28.964
252500	249479	31.41	6.332	18936.	1.901	1231.	1.491	8.255	28.964
253000	249967	31.41	6.185	18878.	1.857	1229.	1.454	8.450	28.964
253500	250455	31.41	6.042	18820.	1.814	1227.	1.418	8.650	28.964
254000	250943	31.40	5.901	18763.	1.772	1225.	1.383	8.856	28.964
254500	251431	31.40	5.764	18705.	1.731	1223.	1.349	9.067	28.964
255000	251919	31.40	5.629 - 5	18647.	1.691 +19	1221.	1.315 + 5	9.284 - 3	28.964
255500	252407	31.40	5.496	18590.	1.651	1219.	1.282	9.507	28.964
256000	252895	31.40	5.367	18532.	1.612	1217.	1.250	9.736	28.964
256500	253383	31.40	5.240	18474.	1.574	1215.	1.219	9.971	28.964
257000	253871	31.40	5.116	18417.	1.537	1213.	1.188	1.021 - 2	28.964
257500	254359	31.39	4.994	18359.	1.500	1211.	1.158	1.046	28.964
258000	254847	31.39	4.875	18301.	1.465	1210.	1.129	1.072	28.964
258500	255335	31.39	4.759	18244.	1.430	1208.	1.100	1.098	28.964
259000	255822	31.39	4.645	18186.	1.396	1206.	1.072	1.125	28.964
259500	256310	31.39	4.533	18128.	1.362	1204.	1.045	1.152	28.964
260000	256798	31.39	4.423 - 5	18071.	1.329 +19	1202.	1.018 + 5	1.181 - 2	28.964
260500	257286	31.38	4.316	18013.	1.297	1200.	9.916 + 4	1.210	28.964
261000	257774	31.38	4.211	17955.	1.266	1198.	9.659	1.240	28.964
261500	258261	31.38	4.109	17898.	1.235	1196.	9.409	1.271	28.964
262000	258749	31.38	4.008	17840.	1.205	1194.	9.164	1.303	28.964
262500	259237	31.38	3.909	17788.	1.175	1192.	8.924	1.336	28.964
263000	259724	31.38	3.800	17789.	1.142	1192.	8.677	1.374	28.964
263500	260212	31.38	3.695	17790.	1.111	1192.	8.436	1.413	28.964
264000	260699	31.37	3.592	17791.	1.080	1192.	8.202	1.454	28.964
264500	261187	31.37	3.492	17792.	1.050	1192.	7.975	1.495	28.964
265000	261675	31.37	3.395 - 5	17792.	1.021 +19	1192.	7.754 + 4	1.538 - 2	28.964
265500	262162	31.37	3.301	17793.	9.925 +18	1192.	7.539	1.581	28.964
266000	262650	31.37	3.210	17794.	9.650	1192.	7.330	1.626	28.964
266500	263137	31.37	3.121	17795.	9.383	1192.	7.127	1.673	28.964
267000	263624	31.37	3.034	17796.	9.123	1192.	6.930	1.720	28.964
267500	264112	31.36	2.950	17797.	8.870	1192.	6.738	1.769	28.964
268000	264599	31.36	2.868	17797.	8.624	1192.	6.551	1.820	28.964
268500	265087	31.36	2.788	17798.	8.386	1192.	6.369	1.872	28.964
269000	265574	31.36	2.711	17799.	8.153	1192.	6.193	1.925	28.964
269500	266061	31.36	2.636	17800.	7.927	1192.	6.022	1.980	28.964

TABLE V.—Concluded  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g, \text{ft sec}^{-2}$	Specific weight $\omega, \text{lb ft}^{-2} \text{sec}^{-2}$	Pressure scale height $H_p, \text{ft}$	Number density $n, \text{ft}^{-3}$	Particle speed $V, \text{ft sec}^{-1}$	Collision frequency $\nu, \text{sec}^{-1}$	Mean free path $L, \text{ft}$	Molecular weight $M$
H, ft	Z, ft								
270000	273542	31.35	2.100 - 5	17807.	6.317 +18	1192.	4.799 + 4	2.485 - 2	28.964
270500	274055	31.34	2.040	17808.	6.138	1192.	4.662	2.557	28.964
271000	274568	31.34	1.982	17808.	5.963	1192.	4.530	2.632	28.964
271500	275082	31.34	1.925	17809.	5.794	1192.	4.401	2.709	28.964
272000	275595	31.34	1.871	17810.	5.629	1192.	4.276	2.788	28.964
272500	276108	31.34	1.817	17811.	5.469	1192.	4.155	2.870	28.964
273000	276622	31.34	1.766	17812.	5.314	1192.	4.037	2.954	28.964
273500	277135	31.34	1.715	17813.	5.163	1192.	3.922	3.040	28.964
274000	277648	31.33	1.667	17814.	5.016	1192.	3.810	3.129	28.964
274500	278162	31.33	1.619	17815.	4.874	1192.	3.702	3.220	28.964
275000	278675	31.33	1.573 - 5	17815.	4.735 +18	1192.	3.597 + 4	3.314 - 2	28.964
275500	279189	31.33	1.528	17816.	4.601	1192.	3.495	3.411	28.964
276000	279702	31.33	1.485	17817.	4.470	1192.	3.396	3.511	28.964
276500	280216	31.33	1.443	17818.	4.343	1192.	3.299	3.614	28.964
277000	280729	31.32	1.402	17819.	4.220	1192.	3.205	3.719	28.964
277500	281243	31.32	1.362	17820.	4.100	1192.	3.114	3.828	28.964
278000	281756	31.32	1.323	17821.	3.983	1192.	3.026	3.940	28.964
278500	282270	31.32	1.285	17821.	3.870	1192.	2.940	4.055	28.964
279000	282784	31.32	1.249	17822.	3.760	1192.	2.856	4.174	28.964
279500	283297	31.32	1.213	17823.	3.654	1192.	2.775	4.296	28.964
280000	283811	31.32	1.179 - 5	17824.	3.550 +18	1192.	2.696 + 4	4.422 - 2	28.964
280500	284325	31.31	1.145	17825.	3.449	1192.	2.620	4.551	28.964
281000	284838	31.31	1.113	17826.	3.351	1192.	2.545	4.684	28.964
281500	285352	31.31	1.081	17827.	3.256	1192.	2.473	4.821	28.964
282000	285866	31.31	1.050	17828.	3.163	1192.	2.403	4.962	28.964
282500	286380	31.31	1.020	17828.	3.073	1192.	2.334	5.107	28.964
283000	286894	31.31	9.912 - 6	17829.	2.986	1192.	2.268	5.256	28.964
283500	287408	31.31	9.630	17830.	2.901	1192.	2.204	5.410	28.964
284000	287921	31.30	9.356	17831.	2.819	1192.	2.141	5.568	28.964
284500	288435	31.30	9.089	17832.	2.739	1192.	2.080	5.731	28.964
285000	288949	31.30	8.831 - 6	17833.	2.661 +18	1192.	2.021 + 4	5.899 - 2	28.964
285500	289463	31.30	8.579	17834.	2.585	1192.	1.964	6.071	28.964
286000	289977	31.30	8.335	17834.	2.512	1192.	1.908	6.249	28.964
286500	290491	31.30	8.098	17835.	2.441	1192.	1.854	6.431	28.964
287000	291005	31.29	7.868	17836.	2.371	1192.	1.801	6.619	28.964
287500	291519	31.29	7.644	17837.	2.304	1192.	1.750	6.813	28.964
288000	292033	31.29	7.426	17838.	2.238	1192.	1.700	7.012	28.964
288500	292548	31.29	7.215	17839.	2.175	1192.	1.652	7.217	28.964
289000	293062	31.29	7.010	17840.	2.113	1192.	1.605	7.428	28.964
289500	293576	31.29	6.810	17841.	2.053	1192.	1.559	7.645	28.964
290000	294090	31.29	6.616 - 6	17841.	1.995 +18	1192.	1.515 + 4	7.869 - 2	28.964
290500	294604	31.28	6.428	17842.	1.938	1192.	1.472	8.099	28.964
291000	295119	31.28	6.245	17843.	1.883	1192.	1.430	8.336	28.964
291500	295633	31.28	6.057	17876.	1.826	1193.	1.388	8.595	28.964
292000	296147	31.28	5.870	17924.	1.770	1195.	1.347	8.868	28.964
292500	296661	31.28	5.689	17971.	1.715	1196.	1.308	9.150	28.963
293000	297176	31.28	5.514	18018.	1.663	1198.	1.269	9.439	28.963
293500	297690	31.27	5.345	18066.	1.612	1199.	1.232	9.737	28.963
294000	298204	31.27	5.181	18113.	1.563	1201.	1.196	1.004 - 1	28.962
294500	298719	31.27	5.023	18160.	1.515	1203.	1.161	1.036	28.962
295000	299233	31.27	4.871 - 6	18208.	1.469 +18	1204.	1.127 + 4	1.068 - 1	28.961
295500	299748	31.27	4.723	18255.	1.425	1206.	1.094	1.102	28.961
296000	300262	31.27	4.580	18302.	1.382	1207.	1.063	1.136	28.961
296500	300777	31.27	4.442	18350.	1.340	1209.	1.032	1.171	28.960
297000	301291	31.26	4.308	18397.	1.300	1210.	1.002	1.208	28.960
297500	301806	31.26	4.178	18445.	1.261	1212.	9.734 + 3	1.245	28.959
298000	302321	31.26	4.053	18492.	1.223	1213.	9.454	1.283	28.959
298500	302835	31.26	3.932	18539.	1.187	1215.	9.184	1.323	28.958
299000	303350	31.26	3.815	18587.	1.151	1216.	8.922	1.363	28.958
299500	303864	31.26	3.701	18634.	1.117	1218.	8.668	1.405	28.957
300000	304379	31.25	3.591 - 6	18682.	1.084 +18	1219.	8.422 + 3	1.448 - 1	28.956

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
270000	266549	31.36	2.563 - 5	17801.	7.708 +18	1192.	5.855 + 4	2.036 - 2	28.964
270500	267036	31.36	2.491	17802.	7.494	1192.	5.693	2.094	28.964
271000	267523	31.35	2.422	17802.	7.287	1192.	5.535	2.154	28.964
271500	268010	31.35	2.355	17803.	7.085	1192.	5.382	2.215	28.964
272000	268498	31.35	2.290	17804.	6.889	1192.	5.233	2.278	28.964
272500	268985	31.35	2.226	17805.	6.698	1192.	5.088	2.343	28.964
273000	269472	31.35	2.165	17806.	6.513	1192.	4.947	2.410	28.964
273500	269959	31.35	2.105	17807.	6.332	1192.	4.810	2.479	28.964
274000	270446	31.34	2.046	17808.	6.157	1192.	4.677	2.549	28.964
274500	270933	31.34	1.989	17808.	5.986	1192.	4.547	2.622	28.964
275000	271420	31.34	1.934 - 5	17809.	5.821 +18	1192.	4.421 + 4	2.697 - 2	28.964
275500	271908	31.34	1.881	17810.	5.660	1192.	4.299	2.773	28.964
276000	272395	31.34	1.828	17811.	5.503	1192.	4.180	2.852	28.964
276500	272882	31.34	1.778	17812.	5.351	1192.	4.064	2.933	28.964
277000	273369	31.34	1.728	17813.	5.202	1192.	3.952	3.017	28.964
277500	273856	31.33	1.681	17813.	5.058	1192.	3.842	3.103	28.964
278000	274342	31.33	1.634	17814.	4.918	1192.	3.736	3.191	28.964
278500	274829	31.33	1.589	17815.	4.782	1192.	3.633	3.282	28.964
279000	275316	31.33	1.545	17816.	4.650	1192.	3.532	3.375	28.964
279500	275803	31.33	1.502	17817.	4.521	1192.	3.434	3.472	28.964
280000	276290	31.33	1.460 - 5	17818.	4.396 +18	1192.	3.339 + 4	3.570 - 2	28.964
280500	276777	31.33	1.420	17818.	4.274	1192.	3.247	3.672	28.964
281000	277264	31.32	1.380	17819.	4.156	1192.	3.157	3.776	28.964
281500	277750	31.32	1.342	17820.	4.041	1192.	3.070	3.884	28.964
282000	278237	31.32	1.305	17821.	3.929	1192.	2.985	3.994	28.964
282500	278724	31.32	1.269	17822.	3.821	1192.	2.902	4.108	28.964
283000	279211	31.32	1.234	17823.	3.715	1192.	2.822	4.225	28.964
283500	279697	31.32	1.199	17824.	3.612	1192.	2.744	4.345	28.964
284000	280184	31.32	1.166	17824.	3.512	1192.	2.668	4.469	28.964
284500	280671	31.31	1.134	17825.	3.415	1192.	2.594	4.596	28.964
285000	281157	31.31	1.102 - 5	17826.	3.321 +18	1192.	2.522 + 4	4.727 - 2	28.964
285500	281644	31.31	1.072	17827.	3.229	1192.	2.453	4.861	28.964
286000	282130	31.31	1.042	17828.	3.140	1192.	2.385	4.999	28.964
286500	282617	31.31	1.013	17829.	3.053	1192.	2.319	5.142	28.964
287000	283103	31.31	9.853 - 6	17829.	2.968	1192.	2.255	5.288	28.964
287500	283590	31.30	9.580	17830.	2.886	1192.	2.192	5.438	28.964
288000	284076	31.30	9.314	17831.	2.806	1192.	2.132	5.593	28.964
288500	284563	31.30	9.056	17832.	2.729	1192.	2.073	5.752	28.964
289000	285049	31.30	8.806	17833.	2.653	1192.	2.015	5.915	28.964
289500	285536	31.30	8.562	17834.	2.580	1192.	1.960	6.084	28.964
290000	286022	31.30	8.325 - 6	17835.	2.509 +18	1192.	1.906 + 4	6.257 - 2	28.964
290500	286509	31.30	8.094	17835.	2.439	1192.	1.853	6.434	28.964
291000	286995	31.29	7.870	17836.	2.372	1192.	1.802	6.617	28.964
291500	287481	31.29	7.652	17837.	2.306	1192.	1.752	6.806	28.964
292000	287967	31.29	7.440	17838.	2.243	1192.	1.703	6.999	28.964
292500	288454	31.29	7.234	17839.	2.181	1192.	1.656	7.198	28.964
293000	288940	31.29	7.034	17840.	2.120	1192.	1.611	7.403	28.964
293500	289426	31.29	6.839	17840.	2.062	1192.	1.566	7.613	28.964
294000	289912	31.29	6.650	17841.	2.005	1192.	1.523	7.829	28.964
294500	290399	31.28	6.466	17842.	1.949	1192.	1.481	8.052	28.964
295000	290885	31.28	6.287 - 6	17843.	1.895 +18	1192.	1.440 + 4	8.281 - 2	28.964
295500	291371	31.28	6.106	17864.	1.841	1193.	1.399	8.526	28.964
296000	291857	31.28	5.922	17910.	1.786	1194.	1.359	8.789	28.964
296500	292343	31.28	5.745	17956.	1.732	1196.	1.320	9.060	28.963
297000	292829	31.28	5.573	18002.	1.681	1197.	1.282	9.339	28.963
297500	293315	31.28	5.407	18048.	1.631	1199.	1.245	9.626	28.963
298000	293801	31.27	5.246	18094.	1.582	1200.	1.210	9.921	28.962
298500	294287	31.27	5.090	18140.	1.535	1202.	1.176	1.022 - 1	28.962
299000	294773	31.27	4.939	18186.	1.490	1203.	1.142	1.053	28.962
299500	295259	31.27	4.793	18232.	1.446	1205.	1.110	1.085	28.961
300000	295745	31.27	4.652 - 6	18278.	1.403 +18	1206.	1.079 + 4	1.118 - 1	28.961

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
300000	295745	31.27	4.652 - 6	18278.	1.403 +18	1206.	1.079 + 4	1.118 - 1	28.96
301000	296717	31.26	4.383	18370.	1.322	1209.	1.019	1.187	28.96
302000	297689	31.26	4.131	18462.	1.246	1212.	9.627 + 3	1.259	28.96
303000	298660	31.26	3.894	18555.	1.175	1215.	9.099	1.336	28.96
304000	299632	31.26	3.672	18647.	1.108	1218.	8.602	1.416	28.96
305000	300603	31.25	3.463	18739.	1.046	1221.	8.135	1.501	28.96
306000	301574	31.25	3.268	18831.	9.866 +17	1224.	7.695	1.591	28.95
307000	302546	31.25	3.084	18923.	9.313	1227.	7.281	1.685	28.95
308000	303517	31.24	2.912	19016.	8.793	1230.	6.891	1.785	28.95
309000	304488	31.24	2.749	19108.	8.305	1233.	6.523	1.890	28.95
310000	305459	31.24	2.597 - 6	19200.	7.846 +17	1236.	6.177 + 3	2.001 - 1	28.95
311000	306430	31.24	2.454	19292.	7.414	1239.	5.851	2.117	28.95
312000	307400	31.23	2.319	19385.	7.008	1242.	5.544	2.240	28.94
313000	308371	31.23	2.192	19477.	6.626	1245.	5.254	2.369	28.94
314000	309342	31.23	2.073	19569.	6.267	1247.	4.981	2.505	28.94
315000	310312	31.22	1.961	19662.	5.928	1250.	4.723	2.648	28.94
316000	311283	31.22	1.855	19754.	5.610	1253.	4.479	2.798	28.93
317000	312253	31.22	1.755	19846.	5.310	1256.	4.249	2.956	28.93
318000	313223	31.21	1.662	19939.	5.027	1259.	4.032	3.122	28.93
319000	314193	31.21	1.573	20031.	4.761	1262.	3.827	3.297	28.92
320000	315163	31.21	1.490 - 6	20123.	4.510 +17	1265.	3.634 + 3	3.480 - 1	28.92
321000	316133	31.21	1.411	20216.	4.273	1267.	3.451	3.673	28.91
322000	317103	31.20	1.337	20308.	4.050	1270.	3.278	3.876	28.91
323000	318073	31.20	1.267	20401.	3.839	1273.	3.114	4.088	28.91
324000	319043	31.20	1.201	20493.	3.640	1276.	2.959	4.312	28.90
325000	320012	31.19	1.139	20586.	3.453	1279.	2.813	4.546	28.90
326000	320982	31.19	1.080	20678.	3.275	1282.	2.674	4.792	28.89
327000	321951	31.19	1.025	20771.	3.108	1284.	2.543	5.050	28.88
328000	322920	31.19	9.725 - 7	20863.	2.950	1287.	2.419	5.320	28.88
329000	323890	31.18	9.207	21011.	2.793	1292.	2.299	5.619	28.87
330000	324859	31.18	8.717 - 7	21164.	2.646 +17	1296.	2.185 + 3	5.933 - 1	28.87
331000	325828	31.18	8.256	21317.	2.507	1301.	2.078	6.261	28.86
332000	326797	31.17	7.823	21470.	2.376	1306.	1.976	6.606	28.85
333000	327766	31.17	7.415	21624.	2.253	1310.	1.880	6.967	28.85
334000	328734	31.17	7.032	21777.	2.137	1315.	1.790	7.345	28.84
335000	329703	31.16	6.670	21930.	2.028	1319.	1.704	7.740	28.83
336000	330672	31.16	6.330	22083.	1.925	1324.	1.624	8.153	28.82
337000	331640	31.16	6.009	22236.	1.828	1328.	1.547	8.586	28.82
338000	332609	31.16	5.706	22389.	1.737	1333.	1.475	9.038	28.81
339000	333577	31.15	5.420	22543.	1.650	1337.	1.406	9.510	28.80
340000	334545	31.15	5.151 - 7	22696.	1.569 +17	1342.	1.341 + 3	1.000 + 0	28.79
341000	335513	31.15	4.897	22849.	1.492	1346.	1.280	1.052	28.78
342000	336481	31.14	4.656	23003.	1.420	1351.	1.222	1.106	28.77
343000	337449	31.14	4.429	23156.	1.351	1355.	1.166	1.162	28.76
344000	338417	31.14	4.215	23310.	1.286	1360.	1.114	1.220	28.75
345000	339385	31.14	4.012	23463.	1.225	1364.	1.064	1.282	28.74
346000	340352	31.13	3.820	23616.	1.167	1368.	1.017	1.345	28.73
347000	341320	31.13	3.639	23770.	1.112	1373.	9.722 + 2	1.412	28.72
348000	342287	31.13	3.467	23923.	1.060	1377.	9.297	1.481	28.71
349000	343255	31.12	3.304	24077.	1.010	1381.	8.893	1.553	28.70
350000	344222	31.12	3.150 - 7	24231.	9.638 +16	1386.	8.509 + 2	1.629 + 0	28.69
351000	345189	31.12	3.004	24384.	9.195	1390.	8.144	1.707	28.68
352000	346157	31.11	2.866	24538.	8.776	1394.	7.796	1.788	28.67
353000	347124	31.11	2.734	24691.	8.378	1399.	7.466	1.873	28.66
354000	348090	31.11	2.610	24845.	8.001	1403.	7.152	1.962	28.64
355000	349057	31.11	2.492	24999.	7.643	1407.	6.852	2.054	28.63
356000	350024	31.10	2.380	25153.	7.303	1411.	6.567	2.149	28.62
357000	350991	31.10	2.273	25306.	6.980	1416.	6.296	2.249	28.61
358000	351957	31.10	2.172	25460.	6.674	1420.	6.037	2.352	28.60
359000	352924	31.09	2.076	25614.	6.382	1424.	5.791	2.459	28.58
360000	353890	31.09	1.985 - 7	25768.	6.105 +16	1428.	5.556 + 2	2.571 + 0	28.57
361000	354856	31.09	1.897	25938.	5.838	1433.	5.330	2.688	28.56
362000	355823	31.09	1.805	26244.	5.557	1441.	5.103	2.825	28.54
363000	356789	31.08	1.718	26549.	5.291	1450.	4.887	2.966	28.53
364000	357755	31.08	1.636	26855.	5.042	1458.	4.683	3.113	28.52
365000	358721	31.08	1.559	27160.	4.807	1466.	4.490	3.265	28.50
366000	359687	31.07	1.486	27466.	4.585	1474.	4.306	3.423	28.49
367000	360652	31.07	1.417	27771.	4.376	1482.	4.133	3.587	28.48
368000	361618	31.07	1.352	28077.	4.178	1490.	3.968	3.756	28.46
369000	362584	31.06	1.291	28383.	3.992	1498.	3.811	3.932	28.45
370000	363549	31.06	1.234 - 7	28689.	3.816 +16	1506.	3.662 + 2	4.114 + 0	28.43
371000	364514	31.06	1.179	28995.	3.649	1514.	3.520	4.302	28.42
372000	365480	31.06	1.127	29301.	3.491	1522.	3.386	4.496	28.40
373000	366445	31.05	1.078	29607.	3.342	1530.	3.258	4.697	28.39
374000	367410	31.05	1.032	29913.	3.200	1538.	3.136	4.905	28.37
375000	368375	31.05	9.882 - 8	30219.	3.066	1546.	3.019	5.119	28.36
376000	369340	31.04	9.466	30525.	2.939	1553.	2.909	5.341	28.34
377000	370305	31.04	9.071	30832.	2.818	1561.	2.803	5.570	28.33
378000	371270	31.04	8.697	31138.	2.703	1569.	2.702	5.806	28.31
379000	372234	31.04	8.341	31444.	2.595	1576.	2.606	6.049	28.30

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $V$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
Z, ft	H, ft								
380000	373199	31.03	8.003 - 8	31751.	2.491 +16	1584.	2.514 + 2	6.301 + 0	28.28
381000	374163	31.03	7.682	32057.	2.393	1592.	2.426	6.560	28.27
382000	375128	31.03	7.377	32364.	2.299	1599.	2.342	6.827	28.25
383000	376092	31.02	7.086	32670.	2.210	1607.	2.262	7.103	28.24
384000	377056	31.02	6.810	32977.	2.125	1614.	2.185	7.386	28.22
385000	378020	31.02	6.546	33284.	2.044	1621.	2.112	7.678	28.21
386000	378984	31.02	6.296	33591.	1.967	1629.	2.041	7.979	28.19
387000	379948	31.01	6.056	33897.	1.894	1636.	1.974	8.289	28.17
388000	380912	31.01	5.828	34204.	1.823	1643.	1.909	8.608	28.16
389000	381876	31.01	5.611	34511.	1.757	1651.	1.847	8.936	28.14
390000	382840	31.00	5.403 - 8	34818.	1.693 +16	1658.	1.788 + 2	9.273 + 0	28.13
391000	383803	31.00	5.205	35125.	1.632	1665.	1.731	9.620	28.11
392000	384767	31.00	5.016	35433.	1.573	1672.	1.676	9.976	28.10
393000	385730	30.99	4.835	35740.	1.518	1680.	1.624	1.034 + 1	28.08
394000	386693	30.99	4.650	36138.	1.461	1689.	1.572	1.075	28.06
395000	387656	30.99	4.449	36749.	1.398	1703.	1.517	1.122	28.05
396000	388620	30.99	4.260	37360.	1.340	1717.	1.466	1.172	28.03
397000	389583	30.98	4.081	37972.	1.284	1731.	1.416	1.222	28.02
398000	390546	30.98	3.913	38583.	1.232	1745.	1.370	1.274	28.00
399000	391508	30.98	3.754	39195.	1.183	1758.	1.325	1.327	27.98
400000	392471	30.97	3.604 - 8	39807.	1.136 +16	1772.	1.283 + 2	1.381 + 1	27.97
402000	394396	30.97	3.328	41031.	1.051	1799.	1.204	1.494	27.94
404000	396321	30.96	3.080	42255.	9.737 +15	1825.	1.132	1.612	27.91
406000	398246	30.96	2.857	43480.	9.043	1851.	1.067	1.736	27.88
408000	400170	30.95	2.655	44705.	8.416	1877.	1.006	1.865	27.85
410000	402094	30.95	2.473	45931.	7.848	1902.	9.512 + 1	2.000	27.82
412000	404017	30.94	2.307	47157.	7.331	1928.	9.003	2.141	27.78
414000	405940	30.93	2.156	48384.	6.861	1952.	8.534	2.288	27.76
416000	407863	30.93	2.019	49611.	6.432	1977.	8.100	2.440	27.73
418000	409785	30.92	1.893	50839.	6.039	2001.	7.698	2.599	27.70
420000	411707	30.92	1.778 - 8	52067.	5.679 +15	2025.	7.325 + 1	2.764 + 1	27.67
422000	413629	30.91	1.672	53295.	5.348	2048.	6.978	2.935	27.64
424000	415550	30.90	1.575	54524.	5.043	2071.	6.655	3.113	27.61
426000	417471	30.90	1.486	55754.	4.761	2094.	6.354	3.296	27.58
428000	419392	30.89	1.403	56984.	4.502	2117.	6.072	3.487	27.56
430000	421312	30.89	1.326	58214.	4.261	2140.	5.809	3.684	27.53
432000	423232	30.88	1.255	59445.	4.038	2162.	5.562	3.887	27.50
434000	425151	30.88	1.190	60676.	3.831	2184.	5.331	4.097	27.48
436000	427070	30.87	1.129	61908.	3.638	2206.	5.113	4.315	27.45
438000	428989	30.86	1.072	63140.	3.458	2228.	4.908	4.539	27.43
440000	430907	30.86	1.019 - 8	64373.	3.291 +15	2249.	4.716 + 1	4.770 + 1	27.41
442000	432825	30.85	9.693 - 9	65606.	3.134	2270.	4.534	5.008	27.38
444000	434743	30.85	9.231	66839.	2.988	2291.	4.362	5.253	27.36
446000	436660	30.84	8.799	68073.	2.851	2312.	4.200	5.505	27.34
448000	438577	30.83	8.394	69308.	2.723	2333.	4.047	5.765	27.31
450000	440494	30.83	8.015	70543.	2.602	2353.	3.902	6.032	27.29
452000	442410	30.82	7.658	71778.	2.489	2374.	3.764	6.306	27.27
454000	444326	30.82	7.324	73014.	2.382	2394.	3.633	6.588	27.25
456000	446241	30.81	7.009	74250.	2.282	2414.	3.509	6.878	27.23
458000	448156	30.81	6.712	75487.	2.188	2433.	3.392	7.175	27.21
460000	450071	30.80	6.433 - 9	76724.	2.098 +15	2453.	3.279 + 1	7.480 + 1	27.19
462000	451985	30.79	6.169	77962.	2.014	2473.	3.173	7.793	27.17
464000	453899	30.79	5.920	79200.	1.934	2492.	3.071	8.114	27.15
466000	455813	30.78	5.684	80439.	1.859	2511.	2.974	8.442	27.13
468000	457727	30.78	5.462	81678.	1.788	2530.	2.882	8.779	27.12
470000	459639	30.77	5.251	82918.	1.720	2549.	2.794	9.124	27.10
472000	461552	30.77	5.051	84158.	1.656	2568.	2.709	9.477	27.08
474000	463464	30.76	4.862	85398.	1.595	2586.	2.629	9.838	27.06
476000	465376	30.75	4.682	86639.	1.538	2605.	2.552	1.021 + 2	27.05
478000	467288	30.75	4.511	87881.	1.483	2623.	2.478	1.059	27.03
480000	469199	30.74	4.349 - 9	89122.	1.431 +15	2641.	2.407 + 1	1.097 + 2	27.01
482000	471110	30.74	4.195	90365.	1.381	2659.	2.340	1.137	27.00
484000	473020	30.73	4.048	91607.	1.334	2677.	2.275	1.177	26.98
486000	474930	30.73	3.908	92851.	1.288	2695.	2.213	1.218	26.97
488000	476840	30.72	3.775	94094.	1.245	2713.	2.153	1.260	26.95
490000	478749	30.71	3.647	95339.	1.204	2731.	2.096	1.303	26.93
492000	480659	30.71	3.526	96583.	1.165	2748.	2.040	1.347	26.92
494000	482567	30.70	3.420	97841.	1.131	2762.	1.990	1.388	26.90
496000	484476	30.70	3.319	99100.	1.099	2775.	1.942	1.429	26.89
498000	486383	30.69	3.222	99419.	1.067	2787.	1.895	1.471	26.87
500000	488291	30.68	3.129 - 9	100358.	1.037 +15	2800.	1.850 + 1	1.513 + 2	26.86
502000	490198	30.68	3.039	101298.	1.008	2813.	1.807	1.557	26.84
504000	492105	30.67	2.952	102238.	9.801 +14	2826.	1.765	1.601	26.83
506000	494012	30.67	2.869	103178.	9.532	2839.	1.724	1.647	26.81
508000	495918	30.66	2.789	104119.	9.273	2851.	1.684	1.693	26.80
510000	497824	30.66	2.711	105060.	9.022	2864.	1.646	1.740	26.78
512000	499729	30.65	2.637	106002.	8.781	2876.	1.609	1.787	26.76
514000	501634	30.64	2.565	106943.	8.549	2889.	1.573	1.836	26.75
516000	503539	30.64	2.496	107886.	8.324	2901.	1.539	1.886	26.73
518000	505443	30.63	2.429	108828.	8.108	2914.	1.505	1.936	26.72



## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
520000	507347	30.63	2.364 - 9	109771.	7.899 +14	2926.	1.472 + 1	1.987 + 2	26.70
522000	509251	30.62	2.302	110714.	7.697	2938.	1.441	2.039	26.68
524000	511154	30.62	2.242	111658.	7.502	2950.	1.410	2.092	26.67
526000	513057	30.61	2.187	112438.	7.324	2960.	1.381	2.143	26.65
528000	514960	30.60	2.136	113074.	7.160	2969.	1.354	2.192	26.63
530000	516862	30.60	2.087	113711.	7.002	2977.	1.328	2.242	26.62
532000	518764	30.59	2.040	114348.	6.847	2985.	1.302	2.292	26.60
534000	520666	30.59	1.993	114985.	6.697	2993.	1.277	2.344	26.58
536000	522567	30.58	1.948	115623.	6.551	3001.	1.252	2.396	26.57
538000	524468	30.58	1.904	116260.	6.409	3009.	1.228	2.449	26.55
540000	526368	30.57	1.862 - 9	116898.	6.270 +14	3017.	1.205 + 1	2.503 + 2	26.53
542000	528268	30.56	1.820	117536.	6.136	3025.	1.182	2.558	26.52
544000	530168	30.56	1.780	118175.	6.005	3032.	1.160	2.614	26.50
546000	532067	30.55	1.741	118813.	5.877	3040.	1.138	2.671	26.48
548000	533966	30.55	1.703	119452.	5.753	3048.	1.117	2.728	26.47
550000	535865	30.54	1.666	120091.	5.632	3056.	1.097	2.787	26.45
552000	537764	30.54	1.629	120730.	5.514	3064.	1.076	2.847	26.44
554000	539662	30.53	1.594	121370.	5.399	3072.	1.057	2.907	26.42
556000	541559	30.52	1.560	122010.	5.287	3080.	1.037	2.969	26.41
558000	543456	30.52	1.527	122626.	5.169	3087.	1.017	3.037	26.45
560000	545353	30.51	1.497 - 9	123081.	5.071 +14	3092.	9.991 + 0	3.095 + 2	26.43
562000	547250	30.51	1.467	123536.	4.975	3098.	9.820	3.155	26.41
564000	549146	30.50	1.439	123991.	4.882	3103.	9.652	3.215	26.39
566000	551042	30.50	1.410	124447.	4.791	3109.	9.488	3.276	26.37
568000	552937	30.49	1.383	124902.	4.701	3114.	9.328	3.339	26.35
570000	554833	30.48	1.356	125358.	4.614	3120.	9.170	3.402	26.34
572000	556727	30.48	1.330	125814.	4.529	3125.	9.016	3.466	26.32
574000	558622	30.47	1.304	126271.	4.445	3130.	8.865	3.531	26.30
576000	560516	30.47	1.279	126727.	4.364	3136.	8.717	3.597	26.28
578000	562410	30.46	1.254	127183.	4.284	3141.	8.573	3.664	26.26
580000	564303	30.46	1.231 - 9	127640.	4.206 +14	3146.	8.431 + 0	3.732 + 2	26.24
582000	566196	30.45	1.207	128097.	4.129	3152.	8.291	3.801	26.23
584000	568089	30.44	1.184	128554.	4.055	3157.	8.155	3.871	26.21
586000	569981	30.44	1.162	129011.	3.981	3162.	8.022	3.942	26.19
588000	571873	30.43	1.140	129468.	3.910	3168.	7.891	4.014	26.17
590000	573765	30.43	1.119	129926.	3.840	3173.	7.762	4.088	26.15
592000	575656	30.42	1.098	130383.	3.771	3178.	7.637	4.162	26.13
594000	577547	30.42	1.077	130841.	3.704	3183.	7.513	4.237	26.12
596000	579437	30.41	1.057	131299.	3.639	3189.	7.392	4.313	26.10
598000	581328	30.40	1.038	131757.	3.575	3194.	7.274	4.391	26.08
600000	583217	30.40	1.018 - 9	132216.	3.512 +14	3199.	7.158 + 0	4.470 + 2	26.06
602000	585107	30.39	9.997 -10	132674.	3.450	3204.	7.044	4.549	26.04
604000	586996	30.39	9.814	133133.	3.390	3210.	6.932	4.630	26.03
606000	588885	30.38	9.635	133592.	3.331	3215.	6.823	4.712	26.01
608000	590773	30.38	9.459	134050.	3.273	3220.	6.715	4.795	25.99
610000	592661	30.37	9.288	134510.	3.217	3225.	6.610	4.880	25.97
612000	594549	30.37	9.120	134969.	3.161	3231.	6.506	4.965	25.95
614000	596437	30.36	8.955	135428.	3.107	3236.	6.405	5.052	25.94
616000	598324	30.35	8.794	135888.	3.054	3241.	6.306	5.140	25.92
618000	600210	30.35	8.637	136348.	3.002	3246.	6.208	5.229	25.90
620000	602097	30.34	8.483 -10	136808.	2.951 +14	3251.	6.112 + 0	5.319 + 2	25.88
622000	603983	30.34	8.332	137268.	2.901	3256.	6.018	5.411	25.86
624000	605868	30.33	8.186	137728.	2.853	3261.	5.927	5.502	25.85
626000	607753	30.33	8.049	138184.	2.807	3265.	5.839	5.591	25.83
628000	609638	30.32	7.914	138641.	2.763	3268.	5.753	5.682	25.81
630000	611523	30.31	7.781	138697.	2.719	3272.	5.668	5.773	25.79
632000	613407	30.31	7.652	139034.	2.676	3276.	5.584	5.866	25.77
634000	615291	30.30	7.524	139370.	2.634	3279.	5.502	5.960	25.76
636000	617175	30.30	7.399	139707.	2.592	3283.	5.422	6.055	25.74
638000	619058	30.29	7.277	140044.	2.551	3287.	5.343	6.152	25.72
640000	620941	30.29	7.156 -10	140381.	2.511 +14	3290.	5.265 + 0	6.250 + 2	25.70
642000	622823	30.28	7.038	140718.	2.472	3294.	5.188	6.349	25.68
644000	624705	30.27	6.923	141056.	2.434	3298.	5.113	6.449	25.67
646000	626587	30.27	6.809	141393.	2.396	3301.	5.039	6.551	25.65
648000	628468	30.26	6.697	141731.	2.359	3305.	4.966	6.654	25.63
650000	630349	30.26	6.588	142068.	2.322	3309.	4.895	6.759	25.61
652000	632230	30.25	6.481	142406.	2.286	3312.	4.825	6.865	25.60
654000	634111	30.25	6.375	142744.	2.251	3316.	4.756	6.972	25.58
656000	635991	30.24	6.272	143082.	2.217	3319.	4.688	7.081	25.56
658000	637870	30.24	6.170	143420.	2.183	3323.	4.621	7.191	25.54
660000	639750	30.23	6.071 -10	143758.	2.149 +14	3327.	4.555 + 0	7.303 + 2	25.52
662000	641629	30.22	5.973	144096.	2.116	3330.	4.491	7.416	25.51
664000	643507	30.22	5.877	144435.	2.084	3334.	4.427	7.530	25.49
666000	645385	30.21	5.782	144773.	2.053	3337.	4.365	7.646	25.47
668000	647263	30.21	5.690	145112.	2.022	3341.	4.303	7.764	25.45
670000	649141	30.20	5.599	145451.	1.991	3345.	4.243	7.883	25.44
672000	651018	30.20	5.510	145790.	1.961	3348.	4.183	8.004	25.42
674000	652895	30.19	5.422	146129.	1.932	3352.	4.125	8.126	25.40
676000	654772	30.18	5.336	146468.	1.903	3355.	4.067	8.249	25.38
678000	656648	30.18	5.252	146807.	1.874	3359.	4.011	8.375	25.36

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
680000	658524	30.17	5.169 -10	147147.	1.846 +14	3362.	3.955 + 0	8.501 + 2	25.35
682000	660399	30.17	5.087	147486.	1.819	3366.	3.900	8.630	25.33
684000	662274	30.16	5.007	147826.	1.792	3370.	3.847	8.760	25.31
686000	664149	30.16	4.929	148166.	1.765	3373.	3.794	8.892	25.29
688000	666023	30.15	4.852	148506.	1.739	3377.	3.741	9.025	25.28
690000	667897	30.15	4.776	148846.	1.713	3380.	3.690	9.160	25.26
692000	669771	30.14	4.702	149186.	1.688	3384.	3.640	9.297	25.24
694000	671645	30.13	4.628	149526.	1.664	3387.	3.590	9.435	25.22
696000	673518	30.13	4.557	149866.	1.639	3391.	3.541	9.575	25.21
698000	675390	30.12	4.486	150207.	1.615	3394.	3.493	9.717	25.19
700000	677263	30.12	4.417 -10	150547.	1.592 +14	3398.	3.446 + 0	9.861 + 2	25.17
702000	679135	30.11	4.349	150888.	1.569	3401.	3.399	1.001 + 3	25.15
704000	681006	30.11	4.282	151229.	1.546	3405.	3.353	1.015	25.13
706000	682878	30.10	4.216	151570.	1.523	3409.	3.308	1.030	25.12
708000	684749	30.10	4.152	151911.	1.501	3412.	3.264	1.045	25.10
710000	686619	30.09	4.088	152252.	1.480	3416.	3.220	1.061	25.08
712000	688489	30.08	4.026	152593.	1.459	3419.	3.177	1.076	25.06
714000	690359	30.08	3.965	152935.	1.438	3423.	3.135	1.092	25.05
716000	692229	30.07	3.905	153276.	1.417	3426.	3.093	1.108	25.03
718000	694098	30.07	3.845	153618.	1.397	3430.	3.052	1.124	25.01
720000	695967	30.06	3.787 -10	153960.	1.377 +14	3433.	3.012 + 0	1.140 + 3	24.99
722000	697836	30.06	3.730	154302.	1.357	3437.	2.972	1.156	24.98
724000	699704	30.05	3.674	154644.	1.338	3440.	2.933	1.173	24.96
726000	701572	30.05	3.619	154986.	1.319	3444.	2.894	1.190	24.94
728000	703439	30.04	3.565	155328.	1.301	3447.	2.857	1.207	24.92
730000	705306	30.03	3.511	155670.	1.282	3450.	2.819	1.224	24.90
732000	707173	30.03	3.459	156013.	1.264	3454.	2.782	1.241	24.89
734000	709040	30.02	3.407	156356.	1.247	3457.	2.746	1.259	24.87
736000	710906	30.02	3.357	156698.	1.229	3461.	2.711	1.277	24.85
738000	712771	30.01	3.307	157041.	1.212	3464.	2.675	1.295	24.83
740000	714637	30.01	3.258 -10	157384.	1.195 +14	3468.	2.641 + 0	1.313 + 3	24.82
742000	716502	30.00	3.210	157727.	1.179	3471.	2.607	1.332	24.80
744000	718367	30.00	3.163	158070.	1.162	3475.	2.573	1.350	24.78
746000	720231	29.99	3.116	158414.	1.146	3478.	2.540	1.369	24.76
748000	722095	29.98	3.071	158757.	1.131	3482.	2.508	1.388	24.75
750000	723959	29.98	3.026	159101.	1.115	3485.	2.476	1.408	24.73
752000	725822	29.97	2.981	159444.	1.100	3488.	2.444	1.427	24.71
754000	727685	29.97	2.938	159788.	1.085	3492.	2.413	1.447	24.69
756000	729548	29.96	2.896	160088.	1.070	3495.	2.383	1.467	24.68
758000	731410	29.96	2.855	160389.	1.056	3498.	2.353	1.486	24.66
760000	733272	29.95	2.815 -10	160650.	1.042 +14	3500.	2.324 + 0	1.506 + 3	24.64
762000	735134	29.95	2.775	160932.	1.028	3503.	2.295	1.527	24.62
764000	736995	29.94	2.736	161213.	1.015	3506.	2.266	1.547	24.60
766000	738856	29.93	2.698	161495.	1.001	3509.	2.238	1.568	24.59
768000	740716	29.93	2.660	161776.	9.882 +13	3511.	2.211	1.588	24.57
770000	742577	29.92	2.623	162058.	9.752	3514.	2.183	1.609	24.55
772000	744436	29.92	2.586	162340.	9.625	3517.	2.157	1.631	24.53
774000	746296	29.91	2.550	162622.	9.499	3520.	2.130	1.652	24.52
776000	748155	29.91	2.514	162904.	9.375	3522.	2.104	1.674	24.50
778000	750014	29.90	2.480	163186.	9.253	3525.	2.078	1.696	24.48
780000	751873	29.90	2.445 -10	163468.	9.133 +13	3528.	2.053 + 0	1.719 + 3	24.46
782000	753731	29.89	2.411	163750.	9.015	3530.	2.028	1.741	24.45
784000	755589	29.88	2.378	164033.	8.898	3533.	2.003	1.764	24.43
786000	757446	29.88	2.345	164315.	8.783	3536.	1.979	1.787	24.41
788000	759303	29.87	2.313	164598.	8.670	3539.	1.955	1.810	24.39
790000	761160	29.87	2.281	164881.	8.559	3541.	1.931	1.834	24.38
792000	763017	29.86	2.250	165163.	8.449	3544.	1.908	1.858	24.36
794000	764873	29.86	2.219	165446.	8.340	3547.	1.885	1.882	24.34
796000	766728	29.85	2.188	165729.	8.234	3549.	1.862	1.906	24.32
798000	768584	29.85	2.158	166012.	8.129	3552.	1.840	1.931	24.30
800000	770439	29.84	2.129 -10	166295.	8.025 +13	3555.	1.818 + 0	1.956 + 3	24.29
805000	775075	29.83	2.057	167004.	7.772	3561.	1.764	2.019	24.24
810000	779709	29.81	1.988	167713.	7.529	3568.	1.712	2.085	24.20
815000	784341	29.80	1.922	168422.	7.294	3575.	1.661	2.152	24.15
820000	788971	29.78	1.858	169132.	7.068	3582.	1.613	2.221	24.11
825000	793599	29.77	1.796	169843.	6.849	3588.	1.566	2.292	24.07
830000	798224	29.76	1.737	170555.	6.638	3595.	1.521	2.364	24.02
835000	802848	29.74	1.680	171266.	6.435	3602.	1.477	2.439	23.98
840000	807469	29.73	1.625	171979.	6.239	3608.	1.434	2.516	23.93
845000	812088	29.72	1.572	172692.	6.049	3615.	1.393	2.595	23.89
850000	816705	29.70	1.521 -10	173406.	5.866 +13	3622.	1.354 + 0	2.676 + 3	23.85
855000	821320	29.69	1.472	174120.	5.690	3628.	1.315	2.759	23.80
860000	825933	29.68	1.424	174835.	5.519	3635.	1.278	2.844	23.76
865000	830543	29.66	1.379	175551.	5.355	3641.	1.242	2.931	23.71
870000	835152	29.65	1.335	176267.	5.195	3648.	1.208	3.021	23.67
875000	839758	29.63	1.292	176984.	5.042	3655.	1.174	3.113	23.62
880000	844362	29.62	1.251	177701.	4.893	3661.	1.141	3.208	23.58
885000	848964	29.61	1.212	178419.	4.750	3668.	1.110	3.305	23.54
890000	853564	29.59	1.173	179138.	4.611	3674.	1.079	3.404	23.49
895000	858162	29.58	1.137	179857.	4.477	3681.	1.050	3.506	23.45

TABLE V.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{v}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
900000	862758	29.57	1.101 -10	180577.	4.347 +13	3687.	1.021 + 0	3.611 + 3	23.40
905000	867352	29.55	1.067	181297.	4.222	3694.	9.935 - 1	3.718	23.36
910000	871943	29.54	1.034	182018.	4.100	3700.	9.667	3.828	23.31
915000	876533	29.53	1.002	182740.	3.983	3707.	9.407	3.940	23.27
920000	881120	29.51	9.710 -11	183462.	3.870	3713.	9.155	4.056	23.23
925000	885705	29.50	9.412	184185.	3.760	3720.	8.911	4.174	23.18
930000	890289	29.48	9.125	184908.	3.654	3726.	8.674	4.296	23.14
935000	894870	29.47	8.847	185633.	3.551	3732.	8.445	4.420	23.09
940000	899449	29.46	8.579	186357.	3.452	3739.	8.222	4.547	23.05
945000	904025	29.44	8.320	187082.	3.355	3745.	8.007	4.678	23.00
950000	908600	29.43	8.070 -11	187808.	3.262 +13	3752.	7.798 - 1	4.811 + 3	22.96
955000	913173	29.42	7.828	188535.	3.172	3758.	7.595	4.948	22.92
960000	917743	29.40	7.594	189262.	3.085	3764.	7.398	5.088	22.87
965000	922312	29.39	7.368	189990.	3.000	3771.	7.207	5.232	22.83
970000	926878	29.38	7.150	190718.	2.918	3777.	7.022	5.379	22.78
975000	931442	29.36	6.938	191447.	2.839	3784.	6.843	5.529	22.74
980000	936004	29.35	6.734	192176.	2.762	3790.	6.668	5.683	22.70
985000	940564	29.34	6.537	192890.	2.687	3796.	6.500	5.840	22.65
990000	945122	29.32	6.350	193508.	2.617	3801.	6.337	5.998	22.61
995000	949678	29.31	6.169	194127.	2.548	3806.	6.179	6.160	22.56
1000000	954232	29.30	5.993 -11	194746.	2.481 +13	3812.	6.026 - 1	6.325 + 3	22.52
1005000	958784	29.28	5.823	195366.	2.417	3817.	5.877	6.495	22.48
1010000	963333	29.27	5.658	195986.	2.354	3822.	5.732	6.668	22.43
1015000	967881	29.26	5.498	196607.	2.293	3827.	5.591	6.845	22.39
1020000	972426	29.24	5.343	197229.	2.234	3832.	5.454	7.026	22.35
1025000	976970	29.23	5.193	197850.	2.176	3837.	5.321	7.212	22.30
1030000	981511	29.22	5.048	198473.	2.121	3843.	5.192	7.401	22.26
1035000	986050	29.20	4.907	199096.	2.067	3848.	5.066	7.595	22.21
1040000	990588	29.19	4.771	199719.	2.014	3853.	4.944	7.793	22.17
1045000	995123	29.18	4.639	200343.	1.963	3858.	4.825	7.996	22.13
1050000	999656	29.16	4.510 -11	200967.	1.913 +13	3863.	4.709 - 1	8.204 + 3	22.08
1055000	1004187	29.15	4.386	201592.	1.865	3868.	4.596	8.416	22.04
1060000	1008715	29.14	4.266	202218.	1.818	3873.	4.487	8.633	22.00
1065000	1013242	29.12	4.149	202844.	1.773	3879.	4.380	8.854	21.95
1070000	1017767	29.11	4.035	203470.	1.728	3884.	4.277	9.081	21.91
1075000	1022290	29.10	3.925	204097.	1.685	3889.	4.176	9.312	21.87
1080000	1026810	29.08	3.819	204724.	1.644	3894.	4.078	9.549	21.82
1085000	1031329	29.07	3.715	205352.	1.603	3899.	3.982	9.791	21.78
1090000	1035845	29.06	3.615	205981.	1.564	3904.	3.889	1.004 + 4	21.74
1095000	1040360	29.04	3.518	206610.	1.525	3909.	3.798	1.029	21.70
1100000	1044872	29.03	3.423 -11	207239.	1.488 +13	3914.	3.710 - 1	1.055 + 4	21.65
1105000	1049382	29.02	3.332	207869.	1.452	3919.	3.625	1.081	21.61
1110000	1053891	29.00	3.243	208500.	1.416	3924.	3.541	1.108	21.57
1115000	1058397	28.99	3.157	209131.	1.382	3929.	3.460	1.136	21.52
1120000	1062901	28.98	3.073	209762.	1.349	3934.	3.380	1.164	21.48
1125000	1067403	28.96	2.992	210394.	1.316	3939.	3.303	1.193	21.44
1130000	1071903	28.95	2.913	211027.	1.284	3944.	3.228	1.222	21.40
1135000	1076401	28.94	2.836	211660.	1.254	3949.	3.155	1.252	21.36
1140000	1080897	28.92	2.762	212294.	1.224	3954.	3.083	1.282	21.31
1145000	1085391	28.91	2.689	212928.	1.195	3959.	3.014	1.314	21.27
1150000	1089883	28.90	2.619 -11	213562.	1.166 +13	3964.	2.946 - 1	1.346 + 4	21.23
1155000	1094373	28.88	2.551	214197.	1.139	3969.	2.880	1.378	21.19
1160000	1098861	28.87	2.485	214833.	1.112	3974.	2.816	1.411	21.15
1165000	1103346	28.86	2.421	215469.	1.086	3979.	2.753	1.445	21.10
1170000	1107830	28.85	2.358	216106.	1.060	3984.	2.692	1.480	21.06
1175000	1112312	28.83	2.298	216743.	1.036	3989.	2.632	1.516	21.02
1180000	1116792	28.82	2.239	217381.	1.012	3994.	2.574	1.552	20.98
1185000	1121269	28.81	2.182	218019.	9.881 +12	3999.	2.518	1.588	20.94
1190000	1125745	28.79	2.126	218658.	9.652	4004.	2.462	1.626	20.90
1195000	1130218	28.78	2.072	219297.	9.430	4009.	2.408	1.665	20.86
1200000	1134690	28.77	2.019 -11	219936.	9.213 +12	4014.	2.356 - 1	1.704 + 4	20.82
1205000	1139159	28.75	1.968	220577.	9.001	4019.	2.305	1.744	20.78
1210000	1143627	28.74	1.919	221217.	8.796	4024.	2.255	1.785	20.74
1215000	1148092	28.73	1.871	221859.	8.595	4029.	2.206	1.826	20.69
1220000	1152556	28.71	1.824	222500.	8.400	4034.	2.159	1.869	20.65
1225000	1157017	28.70	1.778	223143.	8.209	4038.	2.112	1.912	20.61
1230000	1161476	28.69	1.734	223786.	8.024	4043.	2.067	1.956	20.57
1235000	1165934	28.68	1.691	224429.	7.843	4048.	2.023	2.001	20.53
1240000	1170389	28.66	1.649	225073.	7.667	4053.	1.980	2.047	20.50
1245000	1174842	28.65	1.608	225717.	7.495	4058.	1.938	2.094	20.46
1250000	1179294	28.64	1.568 -11	226362.	7.327 +12	4063.	1.897 - 1	2.142 + 4	20.42
1255000	1183743	28.62	1.530	227007.	7.164	4068.	1.857	2.191	20.38
1260000	1188190	28.61	1.492	227653.	7.005	4073.	1.818	2.241	20.34
1265000	1192635	28.60	1.456	228300.	6.850	4077.	1.779	2.291	20.30
1270000	1197079	28.58	1.420	228946.	6.699	4082.	1.742	2.343	20.26
1275000	1201520	28.57	1.386	229594.	6.551	4087.	1.706	2.396	20.22
1280000	1205959	28.56	1.352	230242.	6.407	4092.	1.670	2.450	20.18
1285000	1210396	28.55	1.319	230890.	6.267	4097.	1.636	2.505	20.15
1290000	1214832	28.53	1.287	231539.	6.130	4102.	1.602	2.561	20.11
1295000	1219265	28.52	1.256	232189.	5.996	4106.	1.569	2.618	20.07

## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
1300000	1223696	28.51	1.226 -11	232839.	5.866 +12	4111.	1.537 - 1	2.676 + 4	20.03
1305000	1228125	28.49	1.197	233489.	5.739	4116.	1.505	2.735	19.99
1310000	1232552	28.48	1.168	234140.	5.615	4121.	1.474	2.795	19.96
1315000	1236978	28.47	1.141	234730.	5.495	4125.	1.444	2.856	19.92
1320000	1241401	28.46	1.114	235266.	5.380	4129.	1.415	2.917	19.88
1325000	1245822	28.44	1.088	235803.	5.267	4133.	1.387	2.980	19.85
1330000	1250241	28.43	1.063	236340.	5.157	4136.	1.359	3.044	19.81
1335000	1254658	28.42	1.038	236878.	5.049	4140.	1.332	3.109	19.77
1340000	1259074	28.40	1.015	237415.	4.944	4144.	1.305	3.175	19.74
1345000	1263487	28.39	9.912 -12	237954.	4.841	4148.	1.279	3.242	19.70
1350000	1267898	28.38	9.684 -12	238492.	4.741 +12	4152.	1.254 - 1	3.311 + 4	19.66
1355000	1272307	28.37	9.462	239032.	4.642	4155.	1.229	3.381	19.63
1360000	1276715	28.35	9.245	239571.	4.546	4159.	1.205	3.452	19.59
1365000	1281120	28.34	9.034	240111.	4.453	4163.	1.181	3.525	19.56
1370000	1285523	28.33	8.828	240651.	4.361	4167.	1.158	3.599	19.52
1375000	1289925	28.32	8.628	241192.	4.271	4170.	1.135	3.675	19.49
1380000	1294324	28.30	8.432	241733.	4.184	4174.	1.113	3.751	19.45
1385000	1298721	28.29	8.241	242275.	4.098	4178.	1.091	3.830	19.42
1390000	1303117	28.28	8.055	242817.	4.015	4181.	1.070	3.910	19.38
1395000	1307510	28.26	7.873	243359.	3.933	4185.	1.049	3.991	19.35
1400000	1311902	28.25	7.696 -12	243902.	3.853 +12	4189.	1.028 - 1	4.074 + 4	19.31
1405000	1316291	28.24	7.523	244445.	3.775	4193.	1.008	4.158	19.28
1410000	1320679	28.23	7.355	244989.	3.698	4196.	9.887 - 2	4.244	19.25
1415000	1325064	28.21	7.190	245533.	3.623	4200.	9.696	4.332	19.21
1420000	1329448	28.20	7.030	246078.	3.550	4204.	9.509	4.421	19.18
1425000	1333829	28.19	6.874	246623.	3.479	4207.	9.326	4.512	19.15
1430000	1338209	28.18	6.721	247168.	3.409	4211.	9.146	4.604	19.12
1435000	1342586	28.16	6.572	247714.	3.341	4215.	8.971	4.698	19.08
1440000	1346962	28.15	6.427	248260.	3.274	4219.	8.799	4.794	19.05
1445000	1351336	28.14	6.285	248806.	3.208	4222.	8.631	4.892	19.02
1450000	1355708	28.13	6.146 -12	249353.	3.144 +12	4226.	8.466 - 2	4.992 + 4	18.99
1455000	1360077	28.11	6.011	249901.	3.082	4230.	8.305	5.093	18.95
1460000	1364445	28.10	5.879	250449.	3.021	4233.	8.147	5.196	18.92
1465000	1368811	28.09	5.751	250997.	2.961	4237.	7.992	5.301	18.89
1470000	1373175	28.07	5.625	251545.	2.902	4241.	7.841	5.408	18.86
1475000	1377537	28.06	5.503	252095.	2.845	4244.	7.693	5.517	18.83
1480000	1381897	28.05	5.383	252644.	2.789	4248.	7.547	5.628	18.80
1485000	1386255	28.04	5.266	253194.	2.734	4252.	7.405	5.741	18.77
1490000	1390611	28.02	5.152	253744.	2.680	4255.	7.266	5.857	18.74
1495000	1394965	28.01	5.041	254295.	2.627	4259.	7.130	5.974	18.71
1500000	1399317	28.00	4.932 -12	254846.	2.576 +12	4263.	6.996 - 2	6.093 + 4	18.68
1505000	1403668	27.99	4.826	255398.	2.526	4266.	6.865	6.214	18.65
1510000	1408016	27.97	4.722	255950.	2.476	4270.	6.737	6.338	18.62
1515000	1412362	27.96	4.621	256502.	2.428	4274.	6.612	6.464	18.59
1520000	1416707	27.95	4.522	257055.	2.381	4277.	6.489	6.592	18.56
1525000	1421049	27.94	4.425	257608.	2.335	4281.	6.368	6.723	18.53
1530000	1425390	27.92	4.331	258162.	2.290	4285.	6.250	6.855	18.51
1535000	1429728	27.91	4.239	258716.	2.245	4288.	6.134	6.990	18.48
1540000	1434065	27.90	4.149	259270.	2.202	4292.	6.021	7.128	18.45
1545000	1438400	27.89	4.061	259825.	2.160	4295.	5.910	7.268	18.42
1550000	1442733	27.87	3.975 -12	260381.	2.118 +12	4299.	5.801 - 2	7.411 + 4	18.40
1555000	1447063	27.86	3.892	260936.	2.077	4303.	5.695	7.556	18.37
1560000	1451392	27.85	3.810	261493.	2.037	4306.	5.590	7.703	18.34
1565000	1455719	27.84	3.730	262049.	1.999	4310.	5.488	7.854	18.31
1570000	1460044	27.82	3.652	262606.	1.960	4314.	5.387	8.007	18.29
1575000	1464367	27.81	3.575	263164.	1.923	4317.	5.289	8.162	18.26
1580000	1468689	27.80	3.501	263722.	1.886	4321.	5.193	8.321	18.24
1585000	1473008	27.79	3.428	264280.	1.850	4324.	5.098	8.482	18.21
1590000	1477325	27.78	3.356	264839.	1.815	4328.	5.006	8.646	18.18
1595000	1481641	27.76	3.287	265398.	1.781	4332.	4.915	8.813	18.16
1600000	1485954	27.75	3.219 -12	265957.	1.747 +12	4335.	4.826 - 2	8.983 + 4	18.13
1605000	1490266	27.74	3.152	266517.	1.714	4339.	4.739	9.156	18.11
1610000	1494575	27.73	3.087	267077.	1.682	4342.	4.653	9.332	18.08
1615000	1498883	27.71	3.024	267638.	1.650	4346.	4.570	9.511	18.06
1620000	1503189	27.70	2.961	268199.	1.619	4350.	4.487	9.693	18.04
1625000	1507493	27.69	2.901	268761.	1.589	4353.	4.407	9.878	18.01
1630000	1511795	27.68	2.841	269323.	1.559	4357.	4.328	1.007 + 5	17.99
1635000	1516095	27.66	2.783	269886.	1.530	4360.	4.250	1.026	17.96
1640000	1520393	27.65	2.727	270449.	1.501	4364.	4.174	1.045	17.94
1645000	1524689	27.64	2.673	270871.	1.474	4366.	4.101	1.065	17.92
1650000	1528983	27.63	2.620 -12	271282.	1.448 +12	4369.	4.029 - 2	1.084 + 5	17.90
1655000	1533276	27.61	2.568	271692.	1.421	4371.	3.958	1.104	17.87
1660000	1537566	27.60	2.517	272103.	1.396	4373.	3.889	1.124	17.85
1665000	1541855	27.59	2.468	272514.	1.371	4376.	3.821	1.145	17.83
1670000	1546142	27.58	2.419	272926.	1.346	4378.	3.754	1.166	17.81
1675000	1550426	27.57	2.372	273337.	1.322	4380.	3.689	1.187	17.78
1680000	1554709	27.55	2.325	273749.	1.298	4383.	3.624	1.209	17.76
1685000	1558990	27.54	2.280	274162.	1.275	4385.	3.561	1.231	17.74
1690000	1563269	27.53	2.235	274574.	1.252	4387.	3.499	1.254	17.72
1695000	1567546	27.52	2.192	274987.	1.229	4390.	3.438	1.277	17.70

TABLE V.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
1700000	1571822	27.50	2.149 -12	275400.	1.207 +12	4392.	3.379 - 2	1.300 + 5	17.68
1705000	1576095	27.49	2.107	275814.	1.186	4394.	3.320	1.324	17.66
1710000	1580367	27.48	2.066	276227.	1.165	4397.	3.262	1.348	17.64
1715000	1584636	27.47	2.026	276641.	1.144	4399.	3.206	1.372	17.62
1720000	1588904	27.46	1.987	277056.	1.124	4401.	3.150	1.397	17.60
1725000	1593170	27.44	1.949	277470.	1.103	4404.	3.096	1.422	17.58
1730000	1597434	27.43	1.911	277885.	1.084	4406.	3.042	1.448	17.56
1735000	1601696	27.42	1.874	278300.	1.065	4408.	2.990	1.474	17.54
1740000	1605956	27.41	1.838	278715.	1.046	4410.	2.938	1.501	17.52
1745000	1610214	27.39	1.803	279131.	1.027	4413.	2.888	1.528	17.50
1750000	1614470	27.38	1.768 -12	279547.	1.009 +12	4415.	2.838 - 2	1.556 + 5	17.48
1755000	1618725	27.37	1.734	279963.	9.911 +11	4417.	2.789	1.584	17.46
1760000	1622977	27.36	1.701	280380.	9.735	4420.	2.741	1.612	17.45
1765000	1627228	27.35	1.668	280797.	9.563	4422.	2.694	1.641	17.43
1770000	1631477	27.33	1.637	281214.	9.395	4424.	2.648	1.671	17.41
1775000	1635724	27.32	1.605	281631.	9.229	4427.	2.603	1.701	17.39
1780000	1639969	27.31	1.575	282049.	9.066	4429.	2.558	1.731	17.38
1785000	1644212	27.30	1.545	282467.	8.907	4431.	2.515	1.762	17.36
1790000	1648453	27.29	1.516	282885.	8.750	4433.	2.472	1.794	17.34
1795000	1652693	27.27	1.487	283304.	8.596	4436.	2.429	1.826	17.32
1800000	1656931	27.26	1.459 -12	283723.	8.445 +11	4438.	2.388 - 2	1.858 + 5	17.31
1805000	1661166	27.25	1.431	284142.	8.297	4440.	2.347	1.892	17.29
1810000	1665400	27.24	1.404	284561.	8.152	4443.	2.307	1.925	17.28
1815000	1669632	27.23	1.378	284981.	8.009	4445.	2.268	1.960	17.26
1820000	1673862	27.21	1.352	285401.	7.869	4447.	2.230	1.995	17.24
1825000	1678090	27.20	1.326	285821.	7.732	4450.	2.192	2.030	17.23
1830000	1682317	27.19	1.301	286242.	7.597	4452.	2.155	2.066	17.21
1835000	1686541	27.18	1.277	286663.	7.464	4454.	2.118	2.103	17.20
1840000	1690764	27.17	1.253	287084.	7.334	4456.	2.082	2.140	17.18
1845000	1694985	27.15	1.230	287506.	7.207	4459.	2.047	2.178	17.17
1850000	1699203	27.14	1.207 -12	287927.	7.082 +11	4461.	2.013 - 2	2.216 + 5	17.15
1855000	1703421	27.13	1.184	288349.	6.959	4463.	1.979	2.256	17.14
1860000	1707636	27.12	1.162	288772.	6.838	4466.	1.945	2.295	17.12
1865000	1711849	27.11	1.141	289194.	6.719	4468.	1.913	2.336	17.11
1870000	1716061	27.09	1.119	289617.	6.603	4470.	1.881	2.377	17.09
1875000	1720270	27.08	1.099	290040.	6.489	4472.	1.849	2.419	17.08
1880000	1724478	27.07	1.078	290464.	6.377	4475.	1.818	2.461	17.06
1885000	1728684	27.06	1.058	290888.	6.267	4477.	1.788	2.505	17.05
1890000	1732888	27.05	1.039	291312.	6.159	4479.	1.758	2.548	17.04
1895000	1737090	27.03	1.020	291736.	6.053	4482.	1.728	2.593	17.02
1900000	1741290	27.02	1.001 -12	292161.	5.949 +11	4484.	1.699 - 2	2.639 + 5	17.01
1905000	1745489	27.01	9.825 -13	292586.	5.846	4486.	1.671	2.685	17.00
1910000	1749686	27.00	9.645	293011.	5.746	4488.	1.643	2.732	16.98
1915000	1753880	26.99	9.468	293436.	5.648	4491.	1.616	2.779	16.97
1920000	1758073	26.98	9.295	293862.	5.551	4493.	1.589	2.828	16.96
1925000	1762265	26.96	9.125	294288.	5.456	4495.	1.563	2.877	16.94
1930000	1766454	26.95	8.958	294714.	5.363	4497.	1.537	2.927	16.93
1935000	1770641	26.94	8.795	295141.	5.271	4500.	1.511	2.978	16.92
1940000	1774827	26.93	8.635	295568.	5.181	4502.	1.486	3.029	16.91
1945000	1779011	26.92	8.478	295995.	5.093	4504.	1.461	3.082	16.90
1950000	1783193	26.90	8.324 -13	296423.	5.006 +11	4506.	1.437 - 2	3.135 + 5	16.88
1955000	1787373	26.89	8.173	296851.	4.921	4509.	1.414	3.190	16.87
1960000	1791551	26.88	8.025	297279.	4.837	4511.	1.390	3.245	16.86
1965000	1795728	26.87	7.880	297707.	4.755	4513.	1.367	3.301	16.85
1970000	1799902	26.86	7.738	298134.	4.675	4515.	1.345	3.357	16.84
1975000	1804075	26.85	7.601	298562.	4.598	4517.	1.323	3.414	16.82
1980000	1808246	26.83	7.467	298990.	4.522	4518.	1.302	3.471	16.81
1985000	1812415	26.82	7.335	299418.	4.447	4520.	1.280	3.530	16.80
1990000	1816582	26.81	7.206	299846.	4.373	4521.	1.260	3.589	16.79
1995000	1820748	26.80	7.079	299275.	4.301	4523.	1.239	3.649	16.78
2000000	1824911	26.79	6.954 -13	300050.	4.230 +11	4524.	1.219 - 2	3.711 + 5	16.77
2010000	1833233	26.76	6.712	300700.	4.091	4527.	1.180	3.836	16.75
2020000	1841548	26.74	6.479	301351.	3.958	4530.	1.142	3.966	16.72
2030000	1849855	26.72	6.254	302002.	3.829	4533.	1.106	4.099	16.70
2040000	1858155	26.69	6.038	302655.	3.704	4536.	1.070	4.237	16.68
2050000	1866448	26.67	5.829	303308.	3.584	4539.	1.036	4.380	16.66
2060000	1874733	26.65	5.628	303962.	3.467	4541.	1.003	4.527	16.64
2070000	1883011	26.62	5.434	304617.	3.355	4544.	9.714 - 3	4.678	16.62
2080000	1891282	26.60	5.248	305272.	3.247	4547.	9.406	4.834	16.60
2090000	1899546	26.58	5.068	305929.	3.142	4550.	9.109	4.995	16.58
2100000	1907803	26.55	4.895 -13	306586.	3.041 +11	4553.	8.821 - 3	5.162 + 5	16.56
2110000	1916052	26.53	4.727	307244.	2.943	4556.	8.543	5.333	16.54
2120000	1924294	26.51	4.566	307903.	2.849	4559.	8.274	5.510	16.52
2130000	1932529	26.48	4.411	308562.	2.758	4562.	8.015	5.692	16.50
2140000	1940757	26.46	4.262	309223.	2.669	4565.	7.763	5.880	16.48
2150000	1948978	26.44	4.117	309884.	2.584	4568.	7.521	6.073	16.46
2160000	1957192	26.41	3.978	310546.	2.502	4570.	7.286	6.273	16.44
2170000	1965398	26.39	3.844	311209.	2.423	4573.	7.059	6.478	16.42
2180000	1973597	26.37	3.715	311872.	2.346	4576.	6.840	6.690	16.40
2190000	1981789	26.35	3.590	312537.	2.272	4579.	6.628	6.908	16.38



## GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Accel. due to gravity $g$ , ft sec <sup>-2</sup>	Specific weight $\omega$ , lb ft <sup>-2</sup> sec <sup>-2</sup>	Pressure scale height $H_p$ , ft	Number density $n$ , ft <sup>-3</sup>	Particle speed $\bar{V}$ , ft sec <sup>-1</sup>	Collision frequency $\nu$ , sec <sup>-1</sup>	Mean free path $L$ , ft	Molecular weight $M$
$Z$ , ft	$H$ , ft								
2200000	1989974	26.32	3.470 -13	313202.	2.200 +11	4582.	6.424 - 3	7.133 + 5	16.36
2210000	1998152	26.30	3.354	313868.	2.131	4585.	6.225	7.365	16.34
2220000	2006323	26.28	3.242	314535.	2.064	4588.	6.034	7.603	16.32
2230000	2014487	26.25	3.134	315202.	2.000	4591.	5.849	7.849	16.31
2240000	2022643	26.23	3.030	315871.	1.937	4593.	5.670	8.102	16.29
2250000	2030793	26.21	2.929	316540.	1.877	4596.	5.497	8.362	16.27
2260000	2038936	26.19	2.832	317210.	1.819	4599.	5.329	8.630	16.24
2270000	2047071	26.16	2.738	317881.	1.762	4602.	5.167	8.906	16.22
2280000	2055199	26.14	2.648	318552.	1.708	4605.	5.011	9.190	16.20
2290000	2063321	26.12	2.561	319225.	1.655	4608.	4.859	9.483	16.18
2300000	2071435	26.10	2.477 -13	319898.	1.604 +11	4611.	4.713 - 3	9.784 + 5	16.16
2310000	2079543	26.07	2.396	320572.	1.555	4614.	4.571	1.009 + 6	16.14
2320000	2087643	26.05	2.317	321247.	1.507	4616.	4.434	1.041	16.12

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**Table VI**  
**SOUND SPEED, COEFFICIENT OF VISCOSITY, KINEMATIC VISCOSITY, AND**  
**THERMAL CONDUCTIVITY**

**English Units**

**NOTE:** A one- or two-digit number (preceded by a plus or minus sign) following the initial entry of each block indicates the power of ten by which that entry and each succeeding entry of that block should be multiplied. A change of power occurring within a block is indicated by a similar notation.

TABLE VI  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
-16500	-16487	1178.08	1.3056 - 5	1.08585 + 0	1.0806 - 4	6.87302 - 1	4.4736 - 6	1.09985 + 0
-16400	-16387	1177.71	1.3050	1.08534	1.0830	6.88789	4.4712	1.09926
-16300	-16287	1177.35	1.3044	1.08483	1.0853	6.90281	4.4688	1.09866
-16200	-16187	1176.99	1.3038	1.08433	1.0877	6.91777	4.4663	1.09807
-16100	-16088	1176.62	1.3032	1.08382	1.0900	6.93276	4.4639	1.09747
-16000	-15988	1176.26	1.3026 - 5	1.08331 + 0	1.0924 - 4	6.94780 - 1	4.4615 - 6	1.09688 + 0
-15900	-15888	1175.89	1.3020	1.08280	1.0948	6.96288	4.4591	1.09628
-15800	-15788	1175.53	1.3014	1.08229	1.0972	6.97800	4.4566	1.09568
-15700	-15688	1175.16	1.3007	1.08179	1.0995	6.99317	4.4542	1.09509
-15600	-15588	1174.80	1.3001	1.08128	1.1019	7.00837	4.4518	1.09449
-15500	-15488	1174.44	1.2995	1.08077	1.1043	7.02362	4.4494	1.09389
-15400	-15389	1174.07	1.2989	1.08026	1.1067	7.03891	4.4469	1.09330
-15300	-15289	1173.71	1.2983	1.07975	1.1091	7.05424	4.4445	1.09270
-15200	-15189	1173.34	1.2977	1.07924	1.1116	7.06962	4.4421	1.09210
-15100	-15089	1172.97	1.2971	1.07873	1.1140	7.08503	4.4396	1.09151
-15000	-14989	1172.61	1.2965 - 5	1.07823 + 0	1.1164 - 4	7.10049 - 1	4.4372 - 6	1.09091 + 0
-14900	-14889	1172.24	1.2959	1.07772	1.1189	7.11599	4.4348	1.09031
-14800	-14790	1171.88	1.2952	1.07721	1.1213	7.13154	4.4324	1.08971
-14700	-14690	1171.51	1.2946	1.07670	1.1237	7.14713	4.4299	1.08912
-14600	-14590	1171.15	1.2940	1.07619	1.1262	7.16276	4.4275	1.08852
-14500	-14490	1170.78	1.2934	1.07568	1.1287	7.17844	4.4251	1.08792
-14400	-14390	1170.41	1.2928	1.07517	1.1311	7.19416	4.4226	1.08732
-14300	-14290	1170.05	1.2922	1.07466	1.1336	7.20992	4.4202	1.08672
-14200	-14190	1169.68	1.2916	1.07415	1.1361	7.22573	4.4178	1.08613
-14100	-14090	1169.32	1.2909	1.07364	1.1386	7.24158	4.4153	1.08553
-14000	-13991	1168.95	1.2903 - 5	1.07312 + 0	1.1411 - 4	7.25747 - 1	4.4129 - 6	1.08493 + 0
-13900	-13891	1168.58	1.2897	1.07261	1.1436	7.27341	4.4105	1.08433
-13800	-13791	1168.22	1.2891	1.07210	1.1461	7.28940	4.4080	1.08373
-13700	-13691	1167.85	1.2885	1.07159	1.1486	7.30542	4.4056	1.08313
-13600	-13591	1167.48	1.2879	1.07108	1.1512	7.32150	4.4032	1.08254
-13500	-13491	1167.11	1.2873	1.07057	1.1537	7.33761	4.4007	1.08194
-13400	-13391	1166.75	1.2866	1.07006	1.1562	7.35378	4.3983	1.08134
-13300	-13292	1166.38	1.2860	1.06955	1.1588	7.36999	4.3958	1.08074
-13200	-13192	1166.01	1.2854	1.06903	1.1613	7.38624	4.3934	1.08014
-13100	-13092	1165.65	1.2848	1.06852	1.1639	7.40254	4.3910	1.07954
-13000	-12992	1165.28	1.2842 - 5	1.06801 + 0	1.1665 - 4	7.41889 - 1	4.3885 - 6	1.07894 + 0
-12900	-12892	1164.91	1.2836	1.06750	1.1691	7.43528	4.3861	1.07834
-12800	-12792	1164.54	1.2829	1.06698	1.1716	7.45171	4.3837	1.07774
-12700	-12692	1164.17	1.2823	1.06647	1.1742	7.46820	4.3812	1.07714
-12600	-12592	1163.81	1.2817	1.06596	1.1768	7.48473	4.3788	1.07654
-12500	-12493	1163.44	1.2811	1.06544	1.1794	7.50130	4.3763	1.07594
-12400	-12393	1163.07	1.2805	1.06493	1.1820	7.51793	4.3739	1.07534
-12300	-12293	1162.70	1.2799	1.06442	1.1847	7.53460	4.3714	1.07474
-12200	-12193	1162.33	1.2792	1.06390	1.1873	7.55131	4.3690	1.07414
-12100	-12093	1161.96	1.2786	1.06339	1.1899	7.56808	4.3666	1.07354
-12000	-11993	1161.59	1.2780 - 5	1.06288 + 0	1.1926 - 4	7.58489 - 1	4.3641 - 6	1.07294 + 0
-11900	-11893	1161.23	1.2774	1.06236	1.1952	7.60175	4.3617	1.07234
-11800	-11793	1160.86	1.2768	1.06185	1.1979	7.61865	4.3592	1.07174
-11700	-11693	1160.49	1.2762	1.06133	1.2006	7.63561	4.3568	1.07114
-11600	-11594	1160.12	1.2755	1.06082	1.2032	7.65261	4.3543	1.07053
-11500	-11494	1159.75	1.2749	1.06030	1.2059	7.66966	4.3519	1.06993
-11400	-11394	1159.38	1.2743	1.05979	1.2086	7.68676	4.3495	1.06933
-11300	-11294	1159.01	1.2737	1.05927	1.2113	7.70390	4.3470	1.06873
-11200	-11194	1158.64	1.2731	1.05876	1.2140	7.72110	4.3446	1.06813
-11100	-11094	1158.27	1.2724	1.05824	1.2167	7.73834	4.3421	1.06753
-11000	-10994	1157.90	1.2718 - 5	1.05773 + 0	1.2194 - 4	7.75564 - 1	4.3397 - 6	1.06693 + 0
-10900	-10894	1157.53	1.2712	1.05721	1.2222	7.77298	4.3372	1.06632
-10800	-10794	1157.16	1.2706	1.05670	1.2249	7.79037	4.3348	1.06572
-10700	-10695	1156.79	1.2700	1.05618	1.2276	7.80781	4.3323	1.06512
-10600	-10595	1156.42	1.2693	1.05566	1.2304	7.82530	4.3299	1.06452
-10500	-10495	1156.05	1.2687	1.05515	1.2331	7.84284	4.3274	1.06391
-10400	-10395	1155.68	1.2681	1.05463	1.2359	7.86043	4.3250	1.06331
-10300	-10295	1155.31	1.2675	1.05411	1.2387	7.87807	4.3225	1.06271
-10200	-10195	1154.94	1.2669	1.05360	1.2415	7.89577	4.3201	1.06211
-10100	-10095	1154.56	1.2662	1.05308	1.2442	7.91351	4.3176	1.06150
-10000	-9995	1154.19	1.2656 - 5	1.05256 + 0	1.2470 - 4	7.93130 - 1	4.3152 - 6	1.06090 + 0
-9900	-9895	1153.82	1.2650	1.05205	1.2498	7.94914	4.3127	1.06030
-9800	-9795	1153.45	1.2644	1.05153	1.2527	7.96704	4.3102	1.05969
-9700	-9695	1153.08	1.2637	1.05101	1.2555	7.98498	4.3078	1.05909
-9600	-9596	1152.71	1.2631	1.05049	1.2583	8.00298	4.3053	1.05849
-9500	-9496	1152.34	1.2625	1.04998	1.2612	8.02103	4.3029	1.05788
-9400	-9396	1151.96	1.2619	1.04946	1.2640	8.03913	4.3004	1.05728
-9300	-9296	1151.59	1.2613	1.04894	1.2669	8.05728	4.2980	1.05668
-9200	-9196	1151.22	1.2606	1.04842	1.2697	8.07548	4.2955	1.05607
-9100	-9096	1150.85	1.2600	1.04790	1.2726	8.09374	4.2931	1.05547

TABLE VI  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	μ, lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	η, ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
-16500	-16513	1178.13	1.3057 - 5	1.08591 + 0	1.0803 - 4	6.87108 - 1	4.4739 - 6	1.09993 + 0
-16400	-16413	1177.76	1.3051	1.08540	1.0827	6.88597	4.4715	1.09934
-16300	-16313	1177.40	1.3045	1.08490	1.0850	6.90090	4.4691	1.09874
-16200	-16213	1177.03	1.3039	1.08439	1.0874	6.91588	4.4666	1.09814
-16100	-16112	1176.67	1.3033	1.08388	1.0897	6.93089	4.4642	1.09755
-16000	-16012	1176.30	1.3027 - 5	1.08337 + 0	1.0921 - 4	6.94595 - 1	4.4618 - 6	1.09695 + 0
-15900	-15912	1175.94	1.3020	1.08286	1.0945	6.96105	4.4594	1.09635
-15800	-15812	1175.57	1.3014	1.08236	1.0969	6.97619	4.4569	1.09575
-15700	-15712	1175.21	1.3008	1.08185	1.0993	6.99137	4.4545	1.09516
-15600	-15612	1174.84	1.3002	1.08134	1.1017	7.00659	4.4521	1.09456
-15500	-15512	1174.48	1.2996	1.08083	1.1041	7.02186	4.4496	1.09396
-15400	-15411	1174.11	1.2990	1.08032	1.1065	7.03717	4.4472	1.09336
-15300	-15311	1173.75	1.2984	1.07981	1.1089	7.05252	4.4448	1.09277
-15200	-15211	1173.38	1.2978	1.07930	1.1113	7.06791	4.4423	1.09217
-15100	-15111	1173.01	1.2971	1.07879	1.1137	7.08334	4.4399	1.09157
-15000	-15011	1172.65	1.2965 - 5	1.07828 + 0	1.1162 - 4	7.09882 - 1	4.4375 - 6	1.09097 + 0
-14900	-14911	1172.28	1.2959	1.07777	1.1186	7.11434	4.4350	1.09037
-14800	-14811	1171.92	1.2953	1.07726	1.1210	7.12990	4.4326	1.08978
-14700	-14710	1171.55	1.2947	1.07675	1.1235	7.14551	4.4302	1.08918
-14600	-14610	1171.18	1.2941	1.07624	1.1260	7.16116	4.4277	1.08858
-14500	-14510	1170.82	1.2935	1.07573	1.1284	7.17685	4.4253	1.08798
-14400	-14410	1170.45	1.2929	1.07522	1.1309	7.19259	4.4229	1.08738
-14300	-14310	1170.08	1.2922	1.07471	1.1334	7.20837	4.4204	1.08678
-14200	-14210	1169.72	1.2916	1.07420	1.1359	7.22419	4.4180	1.08618
-14100	-14110	1169.35	1.2910	1.07368	1.1384	7.24006	4.4156	1.08559
-14000	-14009	1168.98	1.2904 - 5	1.07317 + 0	1.1409 - 4	7.25597 - 1	4.4131 - 6	1.08499 + 0
-13900	-13909	1168.62	1.2898	1.07266	1.1434	7.27193	4.4107	1.08439
-13800	-13809	1168.25	1.2892	1.07215	1.1459	7.28793	4.4083	1.08379
-13700	-13709	1167.88	1.2885	1.07164	1.1484	7.30398	4.4058	1.08319
-13600	-13609	1167.51	1.2879	1.07113	1.1509	7.32007	4.4034	1.08259
-13500	-13509	1167.15	1.2873	1.07061	1.1535	7.33620	4.4009	1.08199
-13400	-13409	1166.78	1.2867	1.07010	1.1560	7.35238	4.3985	1.08139
-13300	-13308	1166.41	1.2861	1.06959	1.1586	7.36861	4.3961	1.08079
-13200	-13208	1166.04	1.2855	1.06908	1.1611	7.38488	4.3936	1.08019
-13100	-13108	1165.68	1.2848	1.06856	1.1637	7.40120	4.3912	1.07959
-13000	-13008	1165.31	1.2842 - 5	1.06805 + 0	1.1663 - 4	7.41756 - 1	4.3887 - 6	1.07899 + 0
-12900	-12908	1164.94	1.2836	1.06754	1.1688	7.43397	4.3863	1.07839
-12800	-12808	1164.57	1.2830	1.06702	1.1714	7.45042	4.3838	1.07779
-12700	-12708	1164.20	1.2824	1.06651	1.1740	7.46692	4.3814	1.07719
-12600	-12608	1163.83	1.2818	1.06600	1.1766	7.48347	4.3790	1.07659
-12500	-12507	1163.47	1.2811	1.06548	1.1792	7.50006	4.3765	1.07599
-12400	-12407	1163.10	1.2805	1.06497	1.1819	7.51670	4.3741	1.07538
-12300	-12307	1162.73	1.2799	1.06446	1.1845	7.53338	4.3716	1.07478
-12200	-12207	1162.36	1.2793	1.06394	1.1871	7.55012	4.3692	1.07418
-12100	-12107	1161.99	1.2787	1.06343	1.1897	7.56690	4.3667	1.07358
-12000	-12007	1161.62	1.2781 - 5	1.06291 + 0	1.1924 - 4	7.58372 - 1	4.3643 - 6	1.07298 + 0
-11900	-11907	1161.25	1.2774	1.06240	1.1950	7.60060	4.3618	1.07238
-11800	-11807	1160.88	1.2768	1.06188	1.1977	7.61752	4.3594	1.07178
-11700	-11707	1160.51	1.2762	1.06137	1.2004	7.63449	4.3569	1.07118
-11600	-11606	1160.14	1.2756	1.06085	1.2031	7.65151	4.3545	1.07057
-11500	-11506	1159.77	1.2750	1.06034	1.2057	7.66857	4.3521	1.06997
-11400	-11406	1159.40	1.2743	1.05982	1.2084	7.68569	4.3496	1.06937
-11300	-11306	1159.03	1.2737	1.05931	1.2111	7.70285	4.3472	1.06877
-11200	-11206	1158.66	1.2731	1.05879	1.2138	7.72006	4.3447	1.06816
-11100	-11106	1158.29	1.2725	1.05827	1.2165	7.73732	4.3423	1.06756
-11000	-11006	1157.92	1.2719 - 5	1.05776 + 0	1.2193 - 4	7.75463 - 1	4.3398 - 6	1.06696 + 0
-10900	-10906	1157.55	1.2712	1.05724	1.2220	7.77199	4.3374	1.06636
-10800	-10806	1157.18	1.2706	1.05673	1.2247	7.78940	4.3349	1.06575
-10700	-10705	1156.81	1.2700	1.05621	1.2275	7.80685	4.3325	1.06515
-10600	-10605	1156.44	1.2694	1.05569	1.2302	7.82436	4.3300	1.06455
-10500	-10505	1156.07	1.2688	1.05518	1.2330	7.84191	4.3275	1.06395
-10400	-10405	1155.70	1.2681	1.05466	1.2358	7.85952	4.3251	1.06334
-10300	-10305	1155.33	1.2675	1.05414	1.2385	7.87718	4.3226	1.06274
-10200	-10205	1154.95	1.2669	1.05362	1.2413	7.89488	4.3202	1.06214
-10100	-10105	1154.58	1.2663	1.05311	1.2441	7.91264	4.3177	1.06153
-10000	-10005	1154.21	1.2656 - 5	1.05259 + 0	1.2469 - 4	7.93044 - 1	4.3153 - 6	1.06093 + 0
-9900	-9905	1153.84	1.2650	1.05207	1.2497	7.94830	4.3128	1.06033
-9800	-9805	1153.47	1.2644	1.05155	1.2525	7.96621	4.3104	1.05972
-9700	-9705	1153.10	1.2638	1.05103	1.2554	7.98417	4.3079	1.05912
-9600	-9604	1152.72	1.2631	1.05052	1.2582	8.00218	4.3054	1.05851
-9500	-9504	1152.35	1.2625	1.05000	1.2610	8.02024	4.3030	1.05791
-9400	-9404	1151.98	1.2619	1.04948	1.2639	8.03836	4.3005	1.05730
-9300	-9304	1151.61	1.2613	1.04896	1.2667	8.05652	4.2981	1.05670
-9200	-9204	1151.23	1.2607	1.04844	1.2696	8.07474	4.2956	1.05610
-9100	-9104	1150.86	1.2600	1.04792	1.2725	8.09301	4.2932	1.05549



TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
-9000	-8996	1150.47	1.2594 - 5	1.04738 + 0	1.2755 - 4	8.11205 - 1	4.2906 - 6	1.05486 + 0
-8900	-8896	1150.10	1.2588	1.04686	1.2783	8.13041	4.2881	1.05426
-8800	-8796	1149.73	1.2581	1.04634	1.2812	8.14882	4.2857	1.05365
-8700	-8696	1149.36	1.2575	1.04583	1.2841	8.16729	4.2832	1.05305
-8600	-8596	1148.98	1.2569	1.04531	1.2871	8.18581	4.2808	1.05245
-8500	-8497	1148.61	1.2563	1.04479	1.2900	8.20439	4.2783	1.05184
-8400	-8397	1148.24	1.2556	1.04427	1.2929	8.22301	4.2758	1.05124
-8300	-8297	1147.86	1.2550	1.04375	1.2958	8.24169	4.2734	1.05063
-8200	-8197	1147.49	1.2544	1.04323	1.2988	8.26043	4.2709	1.05003
-8100	-8097	1147.12	1.2538	1.04271	1.3017	8.27922	4.2685	1.04942
-8000	-7997	1146.74	1.2531 - 5	1.04219 + 0	1.3047 - 4	8.29806 - 1	4.2660 - 6	1.04881 + 0
-7900	-7897	1146.37	1.2525	1.04167	1.3077	8.31696	4.2635	1.04821
-7800	-7797	1146.00	1.2519	1.04114	1.3107	8.33591	4.2611	1.04760
-7700	-7697	1145.62	1.2513	1.04062	1.3136	8.35492	4.2586	1.04700
-7600	-7597	1145.25	1.2506	1.04010	1.3166	8.37398	4.2561	1.04639
-7500	-7497	1144.87	1.2500	1.03958	1.3197	8.39310	4.2537	1.04579
-7400	-7397	1144.50	1.2494	1.03906	1.3227	8.41227	4.2512	1.04518
-7300	-7297	1144.13	1.2487	1.03854	1.3257	8.43150	4.2487	1.04457
-7200	-7198	1143.75	1.2481	1.03802	1.3287	8.45079	4.2463	1.04397
-7100	-7098	1143.38	1.2475	1.03749	1.3318	8.47013	4.2438	1.04336
-7000	-6998	1143.00	1.2469 - 5	1.03697 + 0	1.3348 - 4	8.48953 - 1	4.2413 - 6	1.04275 + 0
-6900	-6898	1142.63	1.2462	1.03645	1.3379	8.50898	4.2389	1.04215
-6800	-6798	1142.25	1.2456	1.03593	1.3409	8.52849	4.2364	1.04154
-6700	-6698	1141.88	1.2450	1.03540	1.3440	8.54806	4.2339	1.04093
-6600	-6598	1141.50	1.2443	1.03488	1.3471	8.56769	4.2315	1.04033
-6500	-6498	1141.13	1.2437	1.03436	1.3502	8.58737	4.2290	1.03972
-6400	-6398	1140.75	1.2431	1.03384	1.3533	8.60711	4.2265	1.03911
-6300	-6298	1140.37	1.2425	1.03331	1.3564	8.62690	4.2241	1.03851
-6200	-6198	1140.00	1.2418	1.03279	1.3595	8.64676	4.2216	1.03790
-6100	-6098	1139.62	1.2412	1.03227	1.3627	8.66667	4.2191	1.03729
-6000	-5998	1139.25	1.2406 - 5	1.03174 + 0	1.3658 - 4	8.68664 - 1	4.2167 - 6	1.03668 + 0
-5900	-5898	1138.87	1.2399	1.03122	1.3690	8.70667	4.2142	1.03607
-5800	-5798	1138.49	1.2393	1.03069	1.3721	8.72676	4.2117	1.03547
-5700	-5698	1138.12	1.2387	1.03017	1.3753	8.74691	4.2092	1.03486
-5600	-5598	1137.74	1.2381	1.02964	1.3785	8.76712	4.2068	1.03425
-5500	-5499	1137.36	1.2374	1.02912	1.3816	8.78738	4.2043	1.03364
-5400	-5399	1136.99	1.2368	1.02860	1.3848	8.80771	4.2018	1.03303
-5300	-5299	1136.61	1.2362	1.02807	1.3880	8.82809	4.1993	1.03242
-5200	-5199	1136.23	1.2355	1.02754	1.3913	8.84854	4.1969	1.03182
-5100	-5099	1135.86	1.2349	1.02702	1.3945	8.86905	4.1944	1.03121
-5000	-4999	1135.48	1.2343 - 5	1.02649 + 0	1.3977 - 4	8.88961 - 1	4.1919 - 6	1.03060 + 0
-4900	-4899	1135.10	1.2336	1.02597	1.4010	8.91024	4.1894	1.02999
-4800	-4799	1134.72	1.2330	1.02544	1.4042	8.93093	4.1870	1.02938
-4700	-4699	1134.35	1.2324	1.02492	1.4075	8.95167	4.1845	1.02877
-4600	-4599	1133.97	1.2317	1.02439	1.4107	8.97248	4.1820	1.02816
-4500	-4499	1133.59	1.2311	1.02386	1.4140	8.99336	4.1795	1.02755
-4400	-4399	1133.21	1.2305	1.02334	1.4173	9.01429	4.1770	1.02694
-4300	-4299	1132.83	1.2298	1.02281	1.4206	9.03528	4.1746	1.02633
-4200	-4199	1132.46	1.2292	1.02228	1.4239	9.05634	4.1721	1.02572
-4100	-4099	1132.08	1.2286	1.02176	1.4273	9.07746	4.1696	1.02511
-4000	-3999	1131.70	1.2279 - 5	1.02123 + 0	1.4306 - 4	9.09864 - 1	4.1671 - 6	1.02450 + 0
-3900	-3899	1131.32	1.2273	1.02070	1.4339	9.11989	4.1646	1.02389
-3800	-3799	1130.94	1.2267	1.02017	1.4373	9.14120	4.1621	1.02328
-3700	-3699	1130.56	1.2260	1.01965	1.4406	9.16257	4.1597	1.02267
-3600	-3599	1130.18	1.2254	1.01912	1.4440	9.18400	4.1572	1.02206
-3500	-3499	1129.80	1.2248	1.01859	1.4474	9.20550	4.1547	1.02145
-3400	-3399	1129.42	1.2241	1.01806	1.4508	9.22706	4.1522	1.02084
-3300	-3299	1129.04	1.2235	1.01753	1.4542	9.24869	4.1497	1.02023
-3200	-3200	1128.67	1.2229	1.01701	1.4576	9.27038	4.1472	1.01962
-3100	-3100	1128.29	1.2222	1.01648	1.4610	9.29214	4.1448	1.01901
-3000	-3000	1127.91	1.2216 - 5	1.01595 + 0	1.4644 - 4	9.31396 - 1	4.1423 - 6	1.01839 + 0
-2900	-2900	1127.53	1.2209	1.01542	1.4679	9.33585	4.1398	1.01778
-2800	-2800	1127.15	1.2203	1.01489	1.4713	9.35780	4.1373	1.01717
-2700	-2700	1126.77	1.2197	1.01436	1.4748	9.37982	4.1348	1.01656
-2600	-2600	1126.38	1.2190	1.01383	1.4783	9.40190	4.1323	1.01595
-2500	-2500	1126.00	1.2184	1.01330	1.4817	9.42405	4.1298	1.01534
-2400	-2400	1125.62	1.2178	1.01277	1.4852	9.44626	4.1273	1.01472
-2300	-2300	1125.24	1.2171	1.01224	1.4887	9.46855	4.1248	1.01411
-2200	-2200	1124.86	1.2165	1.01171	1.4923	9.49090	4.1224	1.01350
-2100	-2100	1124.48	1.2159	1.01118	1.4958	9.51331	4.1199	1.01289
-2000	-2000	1124.10	1.2152 - 5	1.01065 + 0	1.4993 - 4	9.53580 - 1	4.1174 - 6	1.01228 + 0
-1900	-1900	1123.72	1.2146	1.01012	1.5029	9.55835	4.1149	1.01166
-1800	-1800	1123.34	1.2139	1.00959	1.5064	9.58097	4.1124	1.01105
-1700	-1700	1122.96	1.2133	1.00906	1.5100	9.60365	4.1099	1.01044
-1600	-1600	1122.57	1.2127	1.00853	1.5136	9.62641	4.1074	1.00982
-1500	-1500	1122.19	1.2120	1.00799	1.5172	9.64923	4.1049	1.00921
-1400	-1400	1121.81	1.2114	1.00746	1.5208	9.67212	4.1024	1.00860
-1300	-1300	1121.43	1.2107	1.00693	1.5244	9.69508	4.0999	1.00798
-1200	-1200	1121.05	1.2101	1.00640	1.5280	9.71812	4.0974	1.00737
-1100	-1100	1120.66	1.2095	1.00587	1.5316	9.74122	4.0949	1.00676

TABLE VII.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
-9000	-9004	1150.49	1.2594 - 5	1.04740 + 0	1.2754 - 4	8.11134 - 1	4.2907 - 6	1.05489 + 0
-8900	-8904	1150.12	1.2588	1.04688	1.2782	8.12971	4.2882	1.05428
-8800	-8804	1149.74	1.2582	1.04636	1.2811	8.14814	4.2858	1.05368
-8700	-8704	1149.37	1.2575	1.04584	1.2840	8.16662	4.2833	1.05307
-8600	-8604	1149.00	1.2569	1.04532	1.2870	8.18515	4.2809	1.05247
-8500	-8503	1148.62	1.2563	1.04480	1.2899	8.20374	4.2784	1.05186
-8400	-8403	1148.25	1.2557	1.04428	1.2928	8.22238	4.2759	1.05126
-8300	-8303	1147.88	1.2550	1.04376	1.2957	8.24108	4.2735	1.05065
-8200	-8203	1147.50	1.2544	1.04324	1.2987	8.25982	4.2710	1.05004
-8100	-8103	1147.13	1.2538	1.04272	1.3017	8.27863	4.2685	1.04944
-8000	-8003	1146.76	1.2532 - 5	1.04220 + 0	1.3046 - 4	8.29748 - 1	4.2661 - 6	1.04883 + 0
-7900	-7903	1146.38	1.2525	1.04168	1.3076	8.31639	4.2636	1.04823
-7800	-7803	1146.01	1.2519	1.04116	1.3106	8.33536	4.2611	1.04762
-7700	-7703	1145.63	1.2513	1.04064	1.3136	8.35438	4.2587	1.04702
-7600	-7603	1145.26	1.2506	1.04012	1.3166	8.37346	4.2562	1.04641
-7500	-7503	1144.88	1.2500	1.03959	1.3196	8.39259	4.2537	1.04580
-7400	-7403	1144.51	1.2494	1.03907	1.3226	8.41177	4.2513	1.04520
-7300	-7303	1144.13	1.2488	1.03855	1.3256	8.43101	4.2488	1.04459
-7200	-7202	1143.76	1.2481	1.03803	1.3286	8.45031	4.2463	1.04398
-7100	-7102	1143.38	1.2475	1.03751	1.3317	8.46966	4.2439	1.04338
-7000	-7002	1143.01	1.2469 - 5	1.03698 + 0	1.3347 - 4	8.48907 - 1	4.2414 - 6	1.04277 + 0
-6900	-6902	1142.63	1.2462	1.03646	1.3378	8.50854	4.2389	1.04216
-6800	-6802	1142.26	1.2456	1.03594	1.3409	8.52806	4.2365	1.04155
-6700	-6702	1141.88	1.2450	1.03542	1.3440	8.54764	4.2340	1.04095
-6600	-6602	1141.51	1.2444	1.03489	1.3470	8.56727	4.2315	1.04034
-6500	-6502	1141.13	1.2437	1.03437	1.3501	8.58697	4.2291	1.03973
-6400	-6402	1140.76	1.2431	1.03385	1.3532	8.60672	4.2266	1.03912
-6300	-6302	1140.38	1.2425	1.03332	1.3564	8.62653	4.2241	1.03852
-6200	-6202	1140.00	1.2418	1.03280	1.3595	8.64639	4.2216	1.03791
-6100	-6102	1139.63	1.2412	1.03227	1.3626	8.66632	4.2192	1.03730
-6000	-6002	1139.25	1.2406 - 5	1.03175 + 0	1.3658 - 4	8.68630 - 1	4.2167 - 6	1.03669 + 0
-5900	-5902	1138.88	1.2400	1.03123	1.3689	8.70634	4.2142	1.03608
-5800	-5802	1138.50	1.2393	1.03070	1.3721	8.72644	4.2117	1.03548
-5700	-5702	1138.12	1.2387	1.03018	1.3752	8.74660	4.2093	1.03487
-5600	-5602	1137.75	1.2381	1.02965	1.3784	8.76681	4.2068	1.03426
-5500	-5501	1137.37	1.2374	1.02913	1.3816	8.78709	4.2043	1.03365
-5400	-5401	1136.99	1.2368	1.02860	1.3848	8.80742	4.2018	1.03304
-5300	-5301	1136.62	1.2362	1.02808	1.3880	8.82782	4.1994	1.03243
-5200	-5201	1136.24	1.2355	1.02755	1.3912	8.84827	4.1969	1.03182
-5100	-5101	1135.86	1.2349	1.02703	1.3944	8.86879	4.1944	1.03121
-5000	-5001	1135.48	1.2343 - 5	1.02650 + 0	1.3977 - 4	8.88936 - 1	4.1919 - 6	1.03061 + 0
-4900	-4901	1135.11	1.2336	1.02597	1.4009	8.91000	4.1895	1.03000
-4800	-4801	1134.73	1.2330	1.02545	1.4042	8.93070	4.1870	1.02939
-4700	-4701	1134.35	1.2324	1.02492	1.4074	8.95145	4.1845	1.02878
-4600	-4601	1133.97	1.2317	1.02440	1.4107	8.97227	4.1820	1.02817
-4500	-4501	1133.59	1.2311	1.02387	1.4140	8.99315	4.1795	1.02756
-4400	-4401	1133.22	1.2305	1.02334	1.4173	9.01409	4.1771	1.02695
-4300	-4301	1132.84	1.2298	1.02282	1.4206	9.03510	4.1746	1.02634
-4200	-4201	1132.46	1.2292	1.02229	1.4239	9.05616	4.1721	1.02573
-4100	-4101	1132.08	1.2286	1.02176	1.4272	9.07729	4.1696	1.02512
-4000	-4001	1131.70	1.2279 - 5	1.02123 + 0	1.4306 - 4	9.09848 - 1	4.1671 - 6	1.02451 + 0
-3900	-3901	1131.32	1.2273	1.02071	1.4339	9.11973	4.1646	1.02390
-3800	-3801	1130.94	1.2267	1.02018	1.4373	9.14105	4.1622	1.02329
-3700	-3701	1130.56	1.2260	1.01965	1.4406	9.16243	4.1597	1.02268
-3600	-3601	1130.19	1.2254	1.01912	1.4440	9.18387	4.1572	1.02206
-3500	-3501	1129.81	1.2248	1.01859	1.4474	9.20538	4.1547	1.02145
-3400	-3401	1129.43	1.2241	1.01807	1.4508	9.22695	4.1522	1.02084
-3300	-3301	1129.05	1.2235	1.01754	1.4542	9.24858	4.1497	1.02023
-3200	-3200	1128.67	1.2229	1.01701	1.4576	9.27028	4.1473	1.01962
-3100	-3100	1128.29	1.2222	1.01648	1.4610	9.29204	4.1448	1.01901
-3000	-3000	1127.91	1.2216 - 5	1.01595 + 0	1.4644 - 4	9.31387 - 1	4.1423 - 6	1.01840 + 0
-2900	-2900	1127.53	1.2210	1.01542	1.4679	9.33576	4.1398	1.01779
-2800	-2800	1127.15	1.2203	1.01489	1.4713	9.35772	4.1373	1.01717
-2700	-2700	1126.77	1.2197	1.01436	1.4748	9.37974	4.1348	1.01656
-2600	-2600	1126.39	1.2190	1.01383	1.4783	9.40183	4.1323	1.01595
-2500	-2500	1126.01	1.2184	1.01330	1.4817	9.42398	4.1298	1.01534
-2400	-2400	1125.62	1.2178	1.01277	1.4852	9.44620	4.1273	1.01473
-2300	-2300	1125.24	1.2171	1.01224	1.4887	9.46849	4.1249	1.01411
-2200	-2200	1124.86	1.2165	1.01171	1.4923	9.49084	4.1224	1.01350
-2100	-2100	1124.48	1.2159	1.01118	1.4958	9.51326	4.1199	1.01289
-2000	-2000	1124.10	1.2152 - 5	1.01065 + 0	1.4993 - 4	9.53575 - 1	4.1174 - 6	1.01228 + 0
-1900	-1900	1123.72	1.2146	1.01012	1.5029	9.55831	4.1149	1.01166
-1800	-1800	1123.34	1.2139	1.00959	1.5064	9.58093	4.1124	1.01105
-1700	-1700	1122.96	1.2133	1.00906	1.5100	9.60362	4.1099	1.01044
-1600	-1600	1122.57	1.2127	1.00853	1.5136	9.62638	4.1074	1.00982
-1500	-1500	1122.19	1.2120	1.00799	1.5172	9.64921	4.1049	1.00921
-1400	-1400	1121.81	1.2114	1.00746	1.5208	9.67210	4.1024	1.00860
-1300	-1300	1121.43	1.2107	1.00693	1.5244	9.69507	4.0999	1.00798
-1200	-1200	1121.05	1.2101	1.00640	1.5280	9.71810	4.0974	1.00737
-1100	-1100	1120.66	1.2095	1.00587	1.5316	9.74120	4.0949	1.00676

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
-1000	-1000	1120.28	1.2088 - 5	1.00533 + 0	1.5353 - 4	9.76439 - 1	4.0924 - 6	1.00614 + 0
-900	-900	1119.90	1.2082	1.00480	1.5389	9.78763	4.0899	1.00553
-800	-800	1119.52	1.2075	1.00427	1.5426	9.81094	4.0874	1.00492
-700	-700	1119.13	1.2069	1.00374	1.5463	9.83432	4.0849	1.00430
-600	-600	1118.75	1.2063	1.00320	1.5499	9.85777	4.0824	1.00369
-500	-500	1118.37	1.2056	1.00267	1.5536	9.88130	4.0799	1.00307
-400	-400	1117.98	1.2050	1.00214	1.5574	9.90489	4.0775	1.00246
-300	-300	1117.60	1.2043	1.00160	1.5611	9.92856	4.0750	1.00184
-200	-200	1117.22	1.2037	1.00107	1.5648	9.95230	4.0725	1.00123
-100	-100	1116.83	1.2031	1.00053	1.5685	9.97611	4.0700	1.00062
0	0	1116.45	1.2024 - 5	1.00000 + 0	1.5723 - 4	1.00000 + 0	4.0674 - 6	1.00000 + 0
100	100	1116.07	1.2018	9.99466 - 1	1.5761	1.00239 + 0	4.0649	9.99385 - 1
200	200	1115.68	1.2011	9.98931	1.5798	1.00480	4.0624	9.98770
300	300	1115.30	1.2005	9.98397	1.5836	1.00721	4.0599	9.98155
400	400	1114.91	1.1998	9.97862	1.5874	1.00963	4.0574	9.97539
500	500	1114.53	1.1992	9.97327	1.5913	1.01205	4.0549	9.96924
600	600	1114.14	1.1985	9.96792	1.5951	1.01448	4.0524	9.96308
700	700	1113.76	1.1979	9.96256	1.5989	1.01692	4.0499	9.95693
800	800	1113.38	1.1973	9.95721	1.6028	1.01937	4.0474	9.95077
900	900	1112.99	1.1966	9.95185	1.6066	1.02182	4.0449	9.94461
1000	1000	1112.61	1.1960 - 5	9.94649 - 1	1.6105 - 4	1.02429 + 0	4.0424 - 6	9.93845 - 1
1100	1100	1112.22	1.1953	9.94113	1.6144	1.02676	4.0399	9.93229
1200	1200	1111.83	1.1947	9.93577	1.6183	1.02923	4.0374	9.92612
1300	1300	1111.45	1.1940	9.93040	1.6222	1.03172	4.0349	9.91996
1400	1400	1111.06	1.1934	9.92503	1.6261	1.03421	4.0324	9.91379
1500	1500	1110.68	1.1927	9.91967	1.6300	1.03671	4.0299	9.90762
1600	1600	1110.29	1.1921	9.91430	1.6339	1.03922	4.0274	9.90146
1700	1700	1109.91	1.1915	9.90892	1.6379	1.04173	4.0249	9.89529
1800	1800	1109.52	1.1908	9.90355	1.6419	1.04426	4.0223	9.88912
1900	1900	1109.13	1.1902	9.89818	1.6459	1.04679	4.0198	9.88294
2000	2000	1108.75	1.1895 - 5	9.89280 - 1	1.6499 - 4	1.04933 + 0	4.0173 - 6	9.87677 - 1
2100	2100	1108.36	1.1889	9.88742	1.6539	1.05188	4.0148	9.87060
2200	2200	1107.97	1.1882	9.88204	1.6579	1.05443	4.0123	9.86442
2300	2300	1107.59	1.1876	9.87666	1.6619	1.05699	4.0098	9.85825
2400	2400	1107.20	1.1869	9.87127	1.6660	1.05956	4.0073	9.85207
2500	2500	1106.81	1.1863	9.86589	1.6700	1.06214	4.0048	9.84589
2600	2600	1106.43	1.1856	9.86050	1.6741	1.06473	4.0023	9.83971
2700	2700	1106.04	1.1850	9.85511	1.6782	1.06732	3.9997	9.83353
2800	2800	1105.65	1.1843	9.84972	1.6822	1.06992	3.9972	9.82735
2900	2900	1105.26	1.1837	9.84432	1.6864	1.07254	3.9947	9.82116
3000	3000	1104.88	1.1830 - 5	9.83893 - 1	1.6905 - 4	1.07515 + 0	3.9922 - 6	9.81498 - 1
3100	3100	1104.49	1.1824	9.83353	1.6946	1.07778	3.9897	9.80879
3200	3200	1104.10	1.1817	9.82813	1.6987	1.08042	3.9872	9.80260
3300	3300	1103.71	1.1811	9.82273	1.7029	1.08306	3.9846	9.79641
3400	3400	1103.32	1.1804	9.81733	1.7071	1.08571	3.9821	9.79022
3500	3500	1102.93	1.1798	9.81193	1.7112	1.08837	3.9796	9.78403
3600	3600	1102.55	1.1791	9.80652	1.7154	1.09104	3.9771	9.77784
3700	3700	1102.16	1.1785	9.80111	1.7197	1.09371	3.9746	9.77165
3800	3800	1101.77	1.1778	9.79570	1.7239	1.09640	3.9720	9.76545
3900	3900	1101.38	1.1772	9.79029	1.7281	1.09909	3.9695	9.75926
4000	4000	1100.99	1.1765 - 5	9.78488 - 1	1.7324 - 4	1.10179 + 0	3.9670 - 6	9.75306 - 1
4100	4100	1100.60	1.1759	9.77946	1.7366	1.10450	3.9645	9.74686
4200	4200	1100.21	1.1752	9.77405	1.7409	1.10722	3.9620	9.74066
4300	4300	1099.82	1.1746	9.76863	1.7452	1.10995	3.9594	9.73446
4400	4400	1099.43	1.1739	9.76321	1.7495	1.11268	3.9569	9.72826
4500	4500	1099.04	1.1733	9.75779	1.7538	1.11543	3.9544	9.72206
4600	4600	1098.65	1.1726	9.75236	1.7581	1.11818	3.9519	9.71585
4700	4700	1098.26	1.1720	9.74694	1.7625	1.12094	3.9493	9.70965
4800	4800	1097.87	1.1713	9.74151	1.7668	1.12371	3.9468	9.70344
4900	4900	1097.48	1.1707	9.73608	1.7712	1.12649	3.9443	9.69723
5000	5000	1097.09	1.1700 - 5	9.73065 - 1	1.7756 - 4	1.12928 + 0	3.9418 - 6	9.69102 - 1
5100	5100	1096.70	1.1694	9.72521	1.7800	1.13207	3.9392	9.68481
5200	5200	1096.31	1.1687	9.71978	1.7844	1.13488	3.9367	9.67860
5300	5300	1095.92	1.1681	9.71434	1.7888	1.13769	3.9342	9.67239
5400	5400	1095.53	1.1674	9.70890	1.7932	1.14051	3.9317	9.66617
5500	5500	1095.14	1.1668	9.70346	1.7977	1.14334	3.9291	9.65996
5600	5600	1094.75	1.1661	9.69802	1.8022	1.14618	3.9266	9.65374
5700	5700	1094.35	1.1654	9.69257	1.8066	1.14903	3.9241	9.64753
5800	5800	1093.96	1.1648	9.68713	1.8111	1.15189	3.9216	9.64131
5900	5900	1093.57	1.1641	9.68168	1.8156	1.15476	3.9190	9.63509
6000	6000	1093.18	1.1635 - 5	9.67623 - 1	1.8202 - 4	1.15764 + 0	3.9165 - 6	9.62887 - 1
6100	6100	1092.79	1.1628	9.67078	1.8247	1.16052	3.9140	9.62266
6200	6200	1092.39	1.1622	9.66532	1.8292	1.16342	3.9114	9.61642
6300	6300	1092.00	1.1615	9.65987	1.8338	1.16632	3.9089	9.61019
6400	6400	1091.61	1.1609	9.65441	1.8384	1.16923	3.9064	9.60397
6500	6500	1091.22	1.1602	9.64895	1.8430	1.17216	3.9038	9.59774
6600	6600	1090.82	1.1595	9.64349	1.8476	1.17509	3.9013	9.59151
6700	6700	1090.43	1.1589	9.63803	1.8522	1.17803	3.8988	9.58528
6800	6800	1090.04	1.1582	9.63256	1.8569	1.18098	3.8962	9.57905
6900	6900	1089.65	1.1576	9.62710	1.8615	1.18394	3.8937	9.57282

TABLE VII.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
-1000	-1000	1120.28	1.2088 - 5	1.00533 + 0	1.5353 - 4	9.76438 - 1	4.0924 - 6	1.00614 + 0
-900	-900	1119.90	1.2082	1.00480	1.5389	9.78762	4.0899	1.00553
-800	-800	1119.52	1.2075	1.00427	1.5426	9.81093	4.0874	1.00492
-700	-700	1119.13	1.2069	1.00374	1.5463	9.83431	4.0849	1.00430
-600	-600	1118.75	1.2063	1.00320	1.5499	9.85777	4.0824	1.00369
-500	-500	1118.37	1.2056	1.00267	1.5536	9.88129	4.0799	1.00307
-400	-400	1117.98	1.2050	1.00214	1.5574	9.90489	4.0775	1.00246
-300	-300	1117.60	1.2043	1.00160	1.5611	9.92856	4.0750	1.00184
-200	-200	1117.22	1.2037	1.00107	1.5648	9.95230	4.0725	1.00123
-100	-100	1116.83	1.2031	1.00053	1.5685	9.97611	4.0700	1.00062
0	0	1116.45	1.2024 - 5	1.00000 + 0	1.5723 - 4	1.00000 + 0	4.0674 - 6	1.00000 + 0
100	100	1116.07	1.2018	9.99466 - 1	1.5761	1.00239 + 0	4.0649	9.99385 - 1
200	200	1115.68	1.2011	9.98931	1.5798	1.00480	4.0624	9.98770
300	300	1115.30	1.2005	9.98397	1.5836	1.00721	4.0599	9.98155
400	400	1114.91	1.1998	9.97862	1.5874	1.00963	4.0574	9.97540
500	500	1114.53	1.1992	9.97327	1.5913	1.01205	4.0549	9.96924
600	600	1114.14	1.1986	9.96792	1.5951	1.01448	4.0524	9.96308
700	700	1113.76	1.1979	9.96256	1.5989	1.01692	4.0499	9.95693
800	800	1113.38	1.1973	9.95721	1.6028	1.01937	4.0474	9.95077
900	900	1112.99	1.1966	9.95185	1.6066	1.02182	4.0449	9.94461
1000	1000	1112.61	1.1960 - 5	9.94649 - 1	1.6105 - 4	1.02429 + 0	4.0424 - 6	9.93845 - 1
1100	1100	1112.22	1.1953	9.94113	1.6144	1.02675	4.0399	9.93229
1200	1200	1111.83	1.1947	9.93577	1.6183	1.02923	4.0374	9.92613
1300	1300	1111.45	1.1940	9.93041	1.6222	1.03172	4.0349	9.91996
1400	1400	1111.06	1.1934	9.92504	1.6261	1.03421	4.0324	9.91380
1500	1500	1110.68	1.1927	9.91967	1.6300	1.03671	4.0299	9.90763
1600	1600	1110.29	1.1921	9.91430	1.6340	1.03922	4.0274	9.90146
1700	1700	1109.91	1.1915	9.90893	1.6379	1.04173	4.0249	9.89530
1800	1800	1109.52	1.1908	9.90356	1.6419	1.04425	4.0224	9.88913
1900	1900	1109.13	1.1902	9.89819	1.6459	1.04679	4.0198	9.88296
2000	2000	1108.75	1.1895 - 5	9.89281 - 1	1.6499 - 4	1.04932 + 0	4.0173 - 6	9.87678 - 1
2100	2100	1108.36	1.1889	9.88743	1.6539	1.05187	4.0148	9.87061
2200	2200	1107.97	1.1882	9.88205	1.6579	1.05442	4.0123	9.86444
2300	2300	1107.59	1.1876	9.87667	1.6619	1.05699	4.0098	9.85826
2400	2400	1107.20	1.1869	9.87129	1.6659	1.05956	4.0073	9.85208
2500	2500	1106.81	1.1863	9.86590	1.6700	1.06213	4.0048	9.84591
2600	2600	1106.43	1.1856	9.86052	1.6741	1.06472	4.0023	9.83973
2700	2700	1106.04	1.1850	9.85513	1.6781	1.06731	3.9997	9.83355
2800	2800	1105.65	1.1843	9.84974	1.6822	1.06991	3.9972	9.82737
2900	2900	1105.26	1.1837	9.84435	1.6863	1.07252	3.9947	9.82119
3000	3000	1104.88	1.1830 - 5	9.83895 - 1	1.6905 - 4	1.07514 + 0	3.9922 - 6	9.81500 - 1
3100	3100	1104.49	1.1824	9.83356	1.6946	1.07777	3.9897	9.80882
3200	3200	1104.10	1.1817	9.82816	1.6987	1.08040	3.9872	9.80263
3300	3299	1103.71	1.1811	9.82276	1.7029	1.08304	3.9847	9.79645
3400	3399	1103.33	1.1804	9.81736	1.7070	1.08570	3.9821	9.79026
3500	3499	1102.94	1.1798	9.81196	1.7112	1.08835	3.9796	9.78407
3600	3599	1102.55	1.1791	9.80655	1.7154	1.09102	3.9771	9.77788
3700	3699	1102.16	1.1785	9.80115	1.7196	1.09370	3.9746	9.77169
3800	3799	1101.77	1.1778	9.79574	1.7238	1.09638	3.9721	9.76550
3900	3899	1101.38	1.1772	9.79033	1.7281	1.09907	3.9695	9.75930
4000	3999	1100.99	1.1765 - 5	9.78492 - 1	1.7323 - 4	1.10177 + 0	3.9670 - 6	9.75311 - 1
4100	4099	1100.60	1.1759	9.77951	1.7366	1.10448	3.9645	9.74691
4200	4199	1100.21	1.1752	9.77409	1.7409	1.10720	3.9620	9.74071
4300	4299	1099.83	1.1746	9.76868	1.7451	1.10992	3.9595	9.73452
4400	4399	1099.44	1.1739	9.76326	1.7494	1.11266	3.9569	9.72832
4500	4499	1099.05	1.1733	9.75784	1.7537	1.11540	3.9544	9.72212
4600	4599	1098.66	1.1726	9.75242	1.7581	1.11815	3.9519	9.71592
4700	4699	1098.27	1.1720	9.74699	1.7624	1.12091	3.9494	9.70971
4800	4799	1097.88	1.1713	9.74157	1.7668	1.12368	3.9469	9.70351
4900	4899	1097.49	1.1707	9.73614	1.7711	1.12646	3.9443	9.69730
5000	4999	1097.10	1.1700 - 5	9.73071 - 1	1.7755 - 4	1.12924 + 0	3.9418 - 6	9.69110 - 1
5100	5099	1096.71	1.1694	9.72528	1.7799	1.13204	3.9393	9.68489
5200	5199	1096.32	1.1687	9.71985	1.7843	1.13484	3.9368	9.67868
5300	5299	1095.92	1.1681	9.71441	1.7887	1.13765	3.9342	9.67247
5400	5399	1095.53	1.1674	9.70898	1.7932	1.14047	3.9317	9.66626
5500	5499	1095.14	1.1668	9.70354	1.7976	1.14330	3.9292	9.66005
5600	5598	1094.75	1.1661	9.69810	1.8021	1.14614	3.9266	9.65384
5700	5698	1094.36	1.1655	9.69266	1.8066	1.14899	3.9241	9.64762
5800	5798	1093.97	1.1648	9.68722	1.8111	1.15185	3.9216	9.64141
5900	5898	1093.58	1.1641	9.68177	1.8156	1.15471	3.9191	9.63519
6000	5998	1093.19	1.1635 - 5	9.67632 - 1	1.8201 - 4	1.15759 + 0	3.9165 - 6	9.62897 - 1
6100	6098	1092.79	1.1628	9.67087	1.8246	1.16047	3.9140	9.62275
6200	6198	1092.40	1.1622	9.66542	1.8292	1.16336	3.9115	9.61653
6300	6298	1092.01	1.1615	9.65997	1.8337	1.16627	3.9089	9.61031
6400	6398	1091.62	1.1609	9.65452	1.8383	1.16918	3.9064	9.60409
6500	6498	1091.22	1.1602	9.64906	1.8429	1.17210	3.9039	9.59787
6600	6598	1090.83	1.1596	9.64360	1.8475	1.17503	3.9014	9.59164
6700	6698	1090.44	1.1589	9.63815	1.8521	1.17797	3.8988	9.58542
6800	6798	1090.05	1.1582	9.63268	1.8568	1.18091	3.8963	9.57919
6900	6898	1089.65	1.1576	9.62722	1.8614	1.18387	3.8938	9.57296

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
7000	7002	1089.25	1.1569 - 5	9.62163 - 1	1.8662 - 4	1.18691 + 0	3.8912 - 6	9.56659 - 1
7100	7102	1088.86	1.1563	9.61616	1.8709	1.18989	3.8886	9.56035
7200	7202	1088.46	1.1556	9.61068	1.8756	1.19288	3.8861	9.55412
7300	7303	1088.07	1.1549	9.60521	1.8803	1.19587	3.8836	9.54788
7400	7403	1087.68	1.1543	9.59973	1.8850	1.19888	3.8810	9.54164
7500	7503	1087.28	1.1536	9.59426	1.8898	1.20190	3.8785	9.53540
7600	7603	1086.89	1.1530	9.58878	1.8945	1.20492	3.8759	9.52916
7700	7703	1086.49	1.1523	9.58329	1.8993	1.20796	3.8734	9.52292
7800	7803	1086.10	1.1516	9.57781	1.9041	1.21101	3.8709	9.51668
7900	7903	1085.71	1.1510	9.57233	1.9089	1.21406	3.8683	9.51043
8000	8003	1085.31	1.1503 - 5	9.56684 - 1	1.9137 - 4	1.21713 + 0	3.8658 - 6	9.50419 - 1
8100	8103	1084.92	1.1497	9.56135	1.9185	1.22020	3.8632	9.49794
8200	8203	1084.52	1.1490	9.55586	1.9234	1.22329	3.8607	9.49169
8300	8303	1084.13	1.1483	9.55036	1.9283	1.22638	3.8582	9.48544
8400	8403	1083.73	1.1477	9.54487	1.9331	1.22949	3.8556	9.47919
8500	8503	1083.33	1.1470	9.53937	1.9380	1.23261	3.8531	9.47294
8600	8604	1082.94	1.1464	9.53387	1.9429	1.23573	3.8505	9.46669
8700	8704	1082.54	1.1457	9.52837	1.9479	1.23887	3.8480	9.46043
8800	8804	1082.15	1.1450	9.52287	1.9528	1.24201	3.8454	9.45418
8900	8904	1081.75	1.1444	9.51737	1.9578	1.24517	3.8429	9.44792
9000	9004	1081.36	1.1437 - 5	9.51186 - 1	1.9628 - 4	1.24833 + 0	3.8403 - 6	9.44166 - 1
9100	9104	1080.96	1.1431	9.50635	1.9678	1.25151	3.8378	9.43540
9200	9204	1080.56	1.1424	9.50084	1.9728	1.25470	3.8353	9.42914
9300	9304	1080.17	1.1417	9.49533	1.9778	1.25789	3.8327	9.42288
9400	9404	1079.77	1.1411	9.48982	1.9828	1.26110	3.8302	9.41662
9500	9504	1079.37	1.1404	9.48430	1.9879	1.26432	3.8276	9.41036
9600	9604	1078.97	1.1397	9.47878	1.9930	1.26755	3.8251	9.40409
9700	9705	1078.58	1.1391	9.47326	1.9981	1.27078	3.8225	9.39783
9800	9805	1078.18	1.1384	9.46774	2.0032	1.27403	3.8200	9.39156
9900	9905	1077.78	1.1377	9.46222	2.0083	1.27729	3.8174	9.38529
10000	10005	1077.39	1.1371 - 5	9.45669 - 1	2.0134 - 4	1.28056 + 0	3.8149 - 6	9.37902 - 1
10100	10105	1076.99	1.1364	9.45117	2.0186	1.28384	3.8123	9.37275
10200	10205	1076.59	1.1358	9.44564	2.0238	1.28713	3.8098	9.36648
10300	10305	1076.19	1.1351	9.44011	2.0290	1.29044	3.8072	9.36020
10400	10405	1075.79	1.1344	9.43457	2.0342	1.29375	3.8047	9.35393
10500	10505	1075.39	1.1338	9.42904	2.0394	1.29707	3.8021	9.34765
10600	10605	1075.00	1.1331	9.42350	2.0446	1.30041	3.7996	9.34138
10700	10705	1074.60	1.1324	9.41796	2.0499	1.30375	3.7970	9.33510
10800	10806	1074.20	1.1318	9.41242	2.0552	1.30711	3.7944	9.32882
10900	10906	1073.80	1.1311	9.40688	2.0605	1.31048	3.7919	9.32254
11000	11006	1073.40	1.1304 - 5	9.40133 - 1	2.0658 - 4	1.31386 + 0	3.7893 - 6	9.31625 - 1
11100	11106	1073.00	1.1298	9.39579	2.0711	1.31725	3.7868	9.30997
11200	11206	1072.60	1.1291	9.39024	2.0765	1.32065	3.7842	9.30369
11300	11306	1072.20	1.1284	9.38469	2.0818	1.32406	3.7817	9.29740
11400	11406	1071.80	1.1278	9.37914	2.0872	1.32748	3.7791	9.29111
11500	11506	1071.40	1.1271	9.37358	2.0926	1.33092	3.7766	9.28483
11600	11606	1071.00	1.1264	9.36803	2.0980	1.33436	3.7740	9.27854
11700	11707	1070.60	1.1258	9.36247	2.1035	1.33782	3.7714	9.27225
11800	11807	1070.20	1.1251	9.35691	2.1089	1.34129	3.7689	9.26595
11900	11907	1069.80	1.1244	9.35135	2.1144	1.34477	3.7663	9.25966
12000	12007	1069.40	1.1237 - 5	9.34578 - 1	2.1199 - 4	1.34826 + 0	3.7638 - 6	9.25337 - 1
12100	12107	1069.00	1.1231	9.34022	2.1254	1.35176	3.7612	9.24707
12200	12207	1068.60	1.1224	9.33465	2.1309	1.35528	3.7586	9.24077
12300	12307	1068.20	1.1217	9.32908	2.1365	1.35880	3.7561	9.23448
12400	12407	1067.80	1.1211	9.32351	2.1420	1.36234	3.7535	9.22818
12500	12507	1067.40	1.1204	9.31793	2.1476	1.36589	3.7510	9.22188
12600	12608	1066.99	1.1197	9.31236	2.1532	1.36945	3.7484	9.21558
12700	12708	1066.59	1.1191	9.30678	2.1588	1.37303	3.7458	9.20927
12800	12808	1066.19	1.1184	9.30120	2.1645	1.37661	3.7433	9.20297
12900	12908	1065.79	1.1177	9.29562	2.1701	1.38021	3.7407	9.19666
13000	13008	1065.39	1.1170 - 5	9.29004 - 1	2.1758 - 4	1.38382 + 0	3.7381 - 6	9.19036 - 1
13100	13108	1064.98	1.1164	9.28445	2.1815	1.38744	3.7356	9.18405
13200	13208	1064.58	1.1157	9.27886	2.1872	1.39107	3.7330	9.17774
13300	13308	1064.18	1.1150	9.27327	2.1929	1.39471	3.7304	9.17143
13400	13409	1063.78	1.1144	9.26768	2.1987	1.39837	3.7279	9.16512
13500	13509	1063.37	1.1137	9.26209	2.2044	1.40204	3.7253	9.15881
13600	13609	1062.97	1.1130	9.25649	2.2102	1.40572	3.7227	9.15249
13700	13709	1062.57	1.1123	9.25090	2.2160	1.40942	3.7202	9.14618
13800	13809	1062.16	1.1117	9.24530	2.2219	1.41312	3.7176	9.13986
13900	13909	1061.76	1.1110	9.23970	2.2277	1.41684	3.7150	9.13354
14000	14009	1061.36	1.1103 - 5	9.23409 - 1	2.2336 - 4	1.42057 + 0	3.7125 - 6	9.12723 - 1
14100	14110	1060.95	1.1096	9.22849	2.2395	1.42432	3.7099	9.12091
14200	14210	1060.55	1.1090	9.22288	2.2454	1.42807	3.7073	9.11458
14300	14310	1060.14	1.1083	9.21727	2.2513	1.43184	3.7047	9.10826
14400	14410	1059.74	1.1076	9.21166	2.2572	1.43562	3.7022	9.10194
14500	14510	1059.34	1.1069	9.20605	2.2632	1.43942	3.6996	9.09561
14600	14610	1058.93	1.1063	9.20043	2.2692	1.44323	3.6970	9.08929
14700	14710	1058.53	1.1056	9.19482	2.2752	1.44704	3.6944	9.08296
14800	14811	1058.12	1.1049	9.18920	2.2812	1.45088	3.6919	9.07663
14900	14911	1057.72	1.1042	9.18357	2.2873	1.45472	3.6893	9.07030



TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
7000	6998	1089.26	1.1569 - 5	9.62176 - 1	1.8661 - 4	1.18684 + 0	3.8912 - 6	9.56673 - 1
7100	7098	1088.87	1.1563	9.61629	1.8708	1.18982	3.8887	9.56050
7200	7198	1088.47	1.1556	9.61082	1.8754	1.19280	3.8862	9.55427
7300	7297	1088.08	1.1550	9.60535	1.8802	1.19580	3.8836	9.54804
7400	7397	1087.69	1.1543	9.59988	1.8849	1.19880	3.8811	9.54180
7500	7497	1087.29	1.1536	9.59440	1.8896	1.20182	3.8785	9.53557
7600	7597	1086.90	1.1530	9.58893	1.8944	1.20484	3.8760	9.52933
7700	7697	1086.51	1.1523	9.58345	1.8991	1.20787	3.8735	9.52310
7800	7797	1086.11	1.1517	9.57797	1.9039	1.21092	3.8709	9.51686
7900	7897	1085.72	1.1510	9.57249	1.9087	1.21397	3.8684	9.51062
8000	7997	1085.32	1.1503 - 5	9.56701 - 1	1.9136 - 4	1.21703 + 0	3.8659 - 6	9.50438 - 1
8100	8097	1084.93	1.1497	9.56152	1.9184	1.22011	3.8633	9.49814
8200	8197	1084.53	1.1490	9.55603	1.9232	1.22319	3.8608	9.49189
8300	8297	1084.14	1.1484	9.55055	1.9281	1.22628	3.8582	9.48565
8400	8397	1083.74	1.1477	9.54506	1.9330	1.22938	3.8557	9.47940
8500	8497	1083.35	1.1470	9.53956	1.9379	1.23250	3.8532	9.47316
8600	8596	1082.95	1.1464	9.53407	1.9428	1.23562	3.8506	9.46691
8700	8696	1082.56	1.1457	9.52857	1.9477	1.23875	3.8481	9.46066
8800	8796	1082.16	1.1451	9.52308	1.9526	1.24189	3.8455	9.45441
8900	8896	1081.77	1.1444	9.51758	1.9576	1.24505	3.8430	9.44816
9000	8996	1081.37	1.1437 - 5	9.51207 - 1	1.9626 - 4	1.24821 + 0	3.8404 - 6	9.44191 - 1
9100	9096	1080.97	1.1431	9.50657	1.9676	1.25138	3.8379	9.43565
9200	9196	1080.58	1.1424	9.50107	1.9726	1.25457	3.8354	9.42940
9300	9296	1080.19	1.1418	9.49556	1.9776	1.25776	3.8328	9.42314
9400	9396	1079.79	1.1411	9.49005	1.9826	1.26096	3.8303	9.41689
9500	9496	1079.39	1.1404	9.48454	1.9877	1.26418	3.8277	9.41063
9600	9596	1078.99	1.1398	9.47903	1.9927	1.26740	3.8252	9.40437
9700	9695	1078.60	1.1391	9.47351	1.9978	1.27064	3.8226	9.39811
9800	9795	1078.20	1.1384	9.46800	2.0029	1.27388	3.8201	9.39185
9900	9895	1077.80	1.1378	9.46248	2.0081	1.27714	3.8175	9.38558
10000	9995	1077.40	1.1371 - 5	9.45696 - 1	2.0132 - 4	1.28041 + 0	3.8150 - 6	9.37932 - 1
10100	10095	1077.01	1.1364	9.45144	2.0183	1.28368	3.8124	9.37306
10200	10195	1076.61	1.1358	9.44591	2.0235	1.28697	3.8099	9.36679
10300	10295	1076.21	1.1351	9.44039	2.0287	1.29027	3.8073	9.36052
10400	10395	1075.81	1.1345	9.43486	2.0339	1.29358	3.8048	9.35425
10500	10495	1075.42	1.1338	9.42933	2.0391	1.29690	3.8022	9.34798
10600	10595	1075.02	1.1331	9.42380	2.0444	1.30023	3.7997	9.34171
10700	10695	1074.62	1.1325	9.41827	2.0496	1.30357	3.7971	9.33544
10800	10794	1074.22	1.1318	9.41273	2.0549	1.30692	3.7946	9.32917
10900	10894	1073.82	1.1311	9.40719	2.0602	1.31029	3.7920	9.32289
11000	10994	1073.42	1.1305 - 5	9.40166 - 1	2.0655 - 4	1.31366 + 0	3.7895 - 6	9.31662 - 1
11100	11094	1073.02	1.1298	9.39612	2.0708	1.31705	3.7869	9.31034
11200	11194	1072.63	1.1291	9.39057	2.0761	1.32044	3.7844	9.30406
11300	11294	1072.23	1.1285	9.38503	2.0815	1.32385	3.7818	9.29779
11400	11394	1071.83	1.1278	9.37948	2.0869	1.32727	3.7793	9.29151
11500	11494	1071.43	1.1271	9.37394	2.0923	1.33070	3.7767	9.28522
11600	11594	1071.03	1.1265	9.36839	2.0977	1.33414	3.7742	9.27894
11700	11693	1070.63	1.1258	9.36283	2.1031	1.33759	3.7716	9.27266
11800	11793	1070.23	1.1251	9.35728	2.1086	1.34106	3.7690	9.26637
11900	11893	1069.83	1.1245	9.35172	2.1140	1.34453	3.7665	9.26009
12000	11993	1069.43	1.1238 - 5	9.34617 - 1	2.1195 - 4	1.34802 + 0	3.7639 - 6	9.25380 - 1
12100	12093	1069.03	1.1231	9.34061	2.1250	1.35152	3.7614	9.24751
12200	12193	1068.63	1.1225	9.33505	2.1305	1.35503	3.7588	9.24122
12300	12293	1068.23	1.1218	9.32948	2.1361	1.35855	3.7563	9.23493
12400	12393	1067.83	1.1211	9.32392	2.1416	1.36208	3.7537	9.22864
12500	12493	1067.43	1.1204	9.31835	2.1472	1.36562	3.7511	9.22235
12600	12592	1067.02	1.1198	9.31278	2.1528	1.36918	3.7486	9.21605
12700	12692	1066.62	1.1191	9.30721	2.1584	1.37275	3.7460	9.20976
12800	12792	1066.22	1.1184	9.30164	2.1640	1.37633	3.7435	9.20346
12900	12892	1065.82	1.1178	9.29606	2.1697	1.37992	3.7409	9.19717
13000	12992	1065.42	1.1171 - 5	9.29049 - 1	2.1753 - 4	1.38352 + 0	3.7383 - 6	9.19087 - 1
13100	13092	1065.02	1.1164	9.28491	2.1810	1.38714	3.7358	9.18457
13200	13192	1064.62	1.1158	9.27933	2.1867	1.39077	3.7332	9.17827
13300	13292	1064.21	1.1151	9.27375	2.1924	1.39441	3.7306	9.17197
13400	13391	1063.81	1.1144	9.26816	2.1982	1.39806	3.7281	9.16566
13500	13491	1063.41	1.1137	9.26258	2.2039	1.40172	3.7255	9.15936
13600	13591	1063.01	1.1131	9.25699	2.2097	1.40540	3.7230	9.15305
13700	13691	1062.60	1.1124	9.25140	2.2155	1.40908	3.7204	9.14675
13800	13791	1062.20	1.1117	9.24581	2.2213	1.41278	3.7178	9.14044
13900	13891	1061.80	1.1111	9.24021	2.2272	1.41650	3.7153	9.13413
14000	13991	1061.39	1.1104 - 5	9.23462 - 1	2.2330 - 4	1.42022 + 0	3.7127 - 6	9.12782 - 1
14100	14090	1060.99	1.1097	9.22902	2.2389	1.42396	3.7101	9.12151
14200	14190	1060.59	1.1090	9.22342	2.2448	1.42771	3.7076	9.11519
14300	14290	1060.18	1.1084	9.21782	2.2507	1.43147	3.7050	9.10888
14400	14390	1059.78	1.1077	9.21222	2.2566	1.43525	3.7024	9.10257
14500	14490	1059.38	1.1070	9.20661	2.2626	1.43904	3.6999	9.09625
14600	14590	1058.97	1.1063	9.20101	2.2686	1.44284	3.6973	9.08993
14700	14690	1058.57	1.1057	9.19540	2.2746	1.44665	3.6947	9.08361
14800	14790	1058.16	1.1050	9.18979	2.2806	1.45047	3.6921	9.07730
14900	14889	1057.76	1.1043	9.18417	2.2866	1.45431	3.6896	9.07098

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
15000	15011	1057.31	1.1036 - 5	9.17795 - 1	2.2933 - 4	1.45858 + 0	3.6867 - 6	9.06397 - 1
15100	15111	1056.91	1.1029	9.17233	2.2994	1.46245	3.6841	9.05764
15200	15211	1056.50	1.1022	9.16670	2.3055	1.46634	3.6816	9.05131
15300	15311	1056.10	1.1015	9.16107	2.3117	1.47024	3.6790	9.04497
15400	15411	1055.69	1.1009	9.15544	2.3178	1.47415	3.6764	9.03863
15500	15512	1055.28	1.1002	9.14981	2.3240	1.47807	3.6738	9.03230
15600	15612	1054.88	1.0995	9.14417	2.3302	1.48201	3.6713	9.02596
15700	15712	1054.47	1.0988	9.13853	2.3364	1.48596	3.6687	9.01962
15800	15812	1054.06	1.0981	9.13290	2.3426	1.48992	3.6661	9.01328
15900	15912	1053.66	1.0975	9.12725	2.3489	1.49390	3.6635	9.00694
16000	16012	1053.25	1.0968 - 5	9.12161 - 1	2.3551 - 4	1.49789 + 0	3.6609 - 6	9.00059 - 1
16100	16112	1052.84	1.0961	9.11597	2.3614	1.50190	3.6584	8.99425
16200	16213	1052.44	1.0954	9.11032	2.3678	1.50592	3.6558	8.98790
16300	16313	1052.03	1.0948	9.10467	2.3741	1.50995	3.6532	8.98156
16400	16413	1051.62	1.0941	9.09902	2.3805	1.51399	3.6506	8.97521
16500	16513	1051.21	1.0934	9.09337	2.3868	1.51805	3.6480	8.96886
16600	16613	1050.81	1.0927	9.08771	2.3932	1.52213	3.6455	8.96251
16700	16713	1050.40	1.0920	9.08205	2.3997	1.52621	3.6429	8.95616
16800	16814	1049.99	1.0914	9.07639	2.4061	1.53032	3.6403	8.94980
16900	16914	1049.58	1.0907	9.07073	2.4126	1.53443	3.6377	8.94345
17000	17014	1049.17	1.0900 - 5	9.06507 - 1	2.4191 - 4	1.53856 + 0	3.6351 - 6	8.93709 - 1
17100	17114	1048.77	1.0893	9.05940	2.4256	1.54270	3.6325	8.93074
17200	17214	1048.36	1.0886	9.05374	2.4321	1.54686	3.6299	8.92438
17300	17314	1047.95	1.0879	9.04807	2.4387	1.55103	3.6274	8.91802
17400	17415	1047.54	1.0873	9.04240	2.4453	1.55522	3.6248	8.91166
17500	17515	1047.13	1.0866	9.03672	2.4519	1.55942	3.6222	8.90530
17600	17615	1046.72	1.0859	9.03105	2.4585	1.56364	3.6196	8.89894
17700	17715	1046.31	1.0852	9.02537	2.4652	1.56787	3.6170	8.89257
17800	17815	1045.90	1.0845	9.01969	2.4718	1.57211	3.6144	8.88621
17900	17915	1045.49	1.0839	9.01401	2.4785	1.57637	3.6118	8.87984
18000	18016	1045.08	1.0832 - 5	9.00832 - 1	2.4853 - 4	1.58064 + 0	3.6092 - 6	8.87347 - 1
18100	18116	1044.67	1.0825	9.00264	2.4920	1.58493	3.6066	8.86710
18200	18216	1044.26	1.0818	8.99695	2.4988	1.58924	3.6041	8.86073
18300	18316	1043.85	1.0811	8.99126	2.5056	1.59355	3.6015	8.85436
18400	18416	1043.44	1.0804	8.98557	2.5124	1.59789	3.5989	8.84799
18500	18516	1043.03	1.0797	8.97987	2.5192	1.60223	3.5963	8.84162
18600	18617	1042.62	1.0791	8.97418	2.5261	1.60660	3.5937	8.83524
18700	18717	1042.21	1.0784	8.96848	2.5329	1.61098	3.5911	8.82886
18800	18817	1041.80	1.0777	8.96278	2.5399	1.61537	3.5885	8.82249
18900	18917	1041.39	1.0770	8.95708	2.5468	1.61978	3.5859	8.81611
19000	19017	1040.97	1.0763 - 5	8.95137 - 1	2.5537 - 4	1.62420 + 0	3.5833 - 6	8.80973 - 1
19100	19118	1040.56	1.0756	8.94567	2.5607	1.62864	3.5807	8.80335
19200	19218	1040.15	1.0749	8.93996	2.5677	1.63310	3.5781	8.79696
19300	19318	1039.74	1.0743	8.93425	2.5748	1.63757	3.5755	8.79058
19400	19418	1039.33	1.0736	8.92854	2.5818	1.64205	3.5729	8.78420
19500	19518	1038.91	1.0729	8.92282	2.5889	1.64655	3.5703	8.77781
19600	19618	1038.50	1.0722	8.91711	2.5960	1.65107	3.5677	8.77142
19700	19719	1038.09	1.0715	8.91139	2.6031	1.65560	3.5651	8.76503
19800	19819	1037.68	1.0708	8.90567	2.6103	1.66015	3.5625	8.75864
19900	19919	1037.26	1.0701	8.89994	2.6174	1.66472	3.5599	8.75225
20000	20019	1036.85	1.0694 - 5	8.89422 - 1	2.6246 - 4	1.66930 + 0	3.5573 - 6	8.74586 - 1
20100	20119	1036.44	1.0688	8.88849	2.6319	1.67390	3.5547	8.73947
20200	20220	1036.02	1.0681	8.88276	2.6391	1.67851	3.5521	8.73307
20300	20320	1035.61	1.0674	8.87703	2.6464	1.68314	3.5495	8.72668
20400	20420	1035.20	1.0667	8.87130	2.6537	1.68778	3.5469	8.72028
20500	20520	1034.78	1.0660	8.86556	2.6610	1.69244	3.5443	8.71388
20600	20620	1034.37	1.0653	8.85982	2.6684	1.69712	3.5417	8.70748
20700	20721	1033.95	1.0646	8.85408	2.6758	1.70182	3.5391	8.70108
20800	20821	1033.54	1.0639	8.84834	2.6832	1.70653	3.5365	8.69468
20900	20921	1033.12	1.0632	8.84260	2.6906	1.71126	3.5339	8.68828
21000	21021	1032.71	1.0626 - 5	8.83685 - 1	2.6981 - 4	1.71600 + 0	3.5313 - 6	8.68187 - 1
21100	21121	1032.29	1.0619	8.83111	2.7056	1.72076	3.5287	8.67547
21200	21222	1031.88	1.0612	8.82536	2.7131	1.72554	3.5261	8.66906
21300	21322	1031.46	1.0605	8.81960	2.7206	1.73033	3.5235	8.66265
21400	21422	1031.05	1.0598	8.81385	2.7282	1.73515	3.5209	8.65624
21500	21522	1030.63	1.0591	8.80809	2.7358	1.73997	3.5183	8.64983
21600	21622	1030.22	1.0584	8.80233	2.7434	1.74482	3.5157	8.64342
21700	21723	1029.80	1.0577	8.79657	2.7510	1.74968	3.5131	8.63701
21800	21823	1029.38	1.0570	8.79081	2.7587	1.75456	3.5104	8.63059
21900	21923	1028.97	1.0563	8.78505	2.7664	1.75946	3.5078	8.62418
22000	22023	1028.55	1.0556 - 5	8.77928 - 1	2.7741 - 4	1.76438 + 0	3.5052 - 6	8.61776 - 1
22100	22123	1028.13	1.0549	8.77351	2.7819	1.76931	3.5026	8.61134
22200	22224	1027.72	1.0542	8.76774	2.7897	1.77426	3.5000	8.60492
22300	22324	1027.30	1.0535	8.76197	2.7975	1.77923	3.4974	8.59850
22400	22424	1026.88	1.0529	8.75619	2.8053	1.78421	3.4948	8.59208
22500	22524	1026.47	1.0522	8.75041	2.8132	1.78922	3.4922	8.58566
22600	22625	1026.05	1.0515	8.74463	2.8211	1.79424	3.4896	8.57923
22700	22725	1025.63	1.0508	8.73885	2.8290	1.79928	3.4869	8.57281
22800	22825	1025.21	1.0501	8.73307	2.8370	1.80433	3.4843	8.56638
22900	22925	1024.79	1.0494	8.72728	2.8449	1.80941	3.4817	8.55995

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
15000	14989	1057.36	1.1036 - 5	9.17856 - 1	2.2927 - 4	1.45817 + 0	3.6870 - 6	9.06465 - 1
15100	15089	1056.95	1.1030	9.17294	2.2988	1.46203	3.6844	9.05833
15200	15189	1056.55	1.1023	9.16732	2.3049	1.46591	3.6819	9.05201
15300	15289	1056.14	1.1016	9.16170	2.3110	1.46980	3.6793	9.04568
15400	15389	1055.74	1.1009	9.15608	2.3171	1.47370	3.6767	9.03935
15500	15488	1055.33	1.1003	9.15046	2.3233	1.47762	3.6741	9.03303
15600	15588	1054.92	1.0996	9.14483	2.3294	1.48155	3.6716	9.02670
15700	15688	1054.52	1.0989	9.13920	2.3356	1.48549	3.6690	9.02037
15800	15788	1054.11	1.0982	9.13357	2.3419	1.48945	3.6664	9.01404
15900	15888	1053.71	1.0976	9.12794	2.3481	1.49342	3.6638	9.00771
16000	15988	1053.30	1.0969 - 5	9.12230 - 1	2.3544 - 4	1.49740 + 0	3.6613 - 6	9.00137 - 1
16100	16088	1052.89	1.0962	9.11667	2.3607	1.50140	3.6587	8.99504
16200	16187	1052.49	1.0955	9.11103	2.3670	1.50541	3.6561	8.98870
16300	16287	1052.08	1.0948	9.10539	2.3733	1.50943	3.6535	8.98237
16400	16387	1051.68	1.0942	9.09975	2.3796	1.51347	3.6510	8.97603
16500	16487	1051.27	1.0935	9.09410	2.3860	1.51752	3.6484	8.96969
16600	16587	1050.86	1.0928	9.08846	2.3924	1.52159	3.6458	8.96335
16700	16687	1050.45	1.0921	9.08281	2.3988	1.52567	3.6432	8.95701
16800	16786	1050.05	1.0914	9.07716	2.4053	1.52976	3.6406	8.95066
16900	16886	1049.64	1.0908	9.07151	2.4117	1.53387	3.6381	8.94432
17000	16986	1049.23	1.0901 - 5	9.06585 - 1	2.4182 - 4	1.53799 + 0	3.6355 - 6	8.93797 - 1
17100	17086	1048.82	1.0894	9.06020	2.4247	1.54212	3.6329	8.93163
17200	17186	1048.42	1.0887	9.05454	2.4312	1.54627	3.6303	8.92528
17300	17286	1048.01	1.0880	9.04888	2.4378	1.55044	3.6277	8.91893
17400	17385	1047.60	1.0874	9.04322	2.4443	1.55461	3.6251	8.91258
17500	17485	1047.19	1.0867	9.03755	2.4509	1.55880	3.6226	8.90623
17600	17585	1046.78	1.0860	9.03189	2.4575	1.56301	3.6200	8.89988
17700	17685	1046.37	1.0853	9.02622	2.4642	1.56723	3.6174	8.89353
17800	17785	1045.96	1.0846	9.02055	2.4708	1.57147	3.6148	8.88717
17900	17885	1045.56	1.0840	9.01488	2.4775	1.57572	3.6122	8.88082
18000	17984	1045.15	1.0833 - 5	9.00921 - 1	2.4842 - 4	1.57998 + 0	3.6096 - 6	8.87446 - 1
18100	18084	1044.74	1.0826	9.00353	2.4909	1.58426	3.6071	8.86810
18200	18184	1044.33	1.0819	8.99785	2.4977	1.58855	3.6045	8.86174
18300	18284	1043.92	1.0812	8.99217	2.5045	1.59286	3.6019	8.85538
18400	18384	1043.51	1.0805	8.98649	2.5113	1.59718	3.5993	8.84902
18500	18484	1043.10	1.0799	8.98081	2.5181	1.60152	3.5967	8.84266
18600	18583	1042.69	1.0792	8.97512	2.5249	1.60587	3.5941	8.83630
18700	18683	1042.28	1.0785	8.96944	2.5318	1.61024	3.5915	8.82993
18800	18783	1041.87	1.0778	8.96375	2.5387	1.61462	3.5889	8.82357
18900	18883	1041.46	1.0771	8.95805	2.5456	1.61902	3.5864	8.81720
19000	18983	1041.05	1.0764 - 5	8.95236 - 1	2.5525 - 4	1.62344 + 0	3.5838 - 6	8.81083 - 1
19100	19083	1040.63	1.0758	8.94667	2.5595	1.62786	3.5812	8.80446
19200	19182	1040.22	1.0751	8.94097	2.5665	1.63231	3.5786	8.79809
19300	19282	1039.81	1.0744	8.93527	2.5735	1.63677	3.5760	8.79172
19400	19382	1039.40	1.0737	8.92957	2.5805	1.64124	3.5734	8.78535
19500	19482	1038.99	1.0730	8.92386	2.5876	1.64573	3.5708	8.77897
19600	19582	1038.58	1.0723	8.91816	2.5947	1.65024	3.5682	8.77260
19700	19681	1038.17	1.0716	8.91245	2.6018	1.65476	3.5656	8.76622
19800	19781	1037.75	1.0710	8.90674	2.6089	1.65930	3.5630	8.75984
19900	19881	1037.34	1.0703	8.90103	2.6161	1.66385	3.5604	8.75347
20000	19981	1036.93	1.0696 - 5	8.89532 - 1	2.6233 - 4	1.66842 + 0	3.5578 - 6	8.74709 - 1
20100	20081	1036.52	1.0689	8.88960	2.6305	1.67300	3.5552	8.74071
20200	20180	1036.10	1.0682	8.88388	2.6377	1.67761	3.5526	8.73432
20300	20280	1035.69	1.0675	8.87816	2.6450	1.68222	3.5500	8.72794
20400	20380	1035.28	1.0668	8.87244	2.6523	1.68686	3.5474	8.72156
20500	20480	1034.86	1.0661	8.86672	2.6596	1.69150	3.5449	8.71517
20600	20580	1034.45	1.0655	8.86099	2.6669	1.69617	3.5423	8.70878
20700	20679	1034.04	1.0648	8.85526	2.6743	1.70085	3.5397	8.70240
20800	20779	1033.62	1.0641	8.84953	2.6816	1.70555	3.5371	8.69601
20900	20879	1033.21	1.0634	8.84380	2.6891	1.71026	3.5345	8.68962
21000	20979	1032.80	1.0627 - 5	8.83807 - 1	2.6965 - 4	1.71500 + 0	3.5319 - 6	8.68322 - 1
21100	21079	1032.38	1.0620	8.83233	2.7040	1.71974	3.5293	8.67683
21200	21178	1031.97	1.0613	8.82659	2.7115	1.72451	3.5267	8.67044
21300	21278	1031.55	1.0606	8.82085	2.7190	1.72929	3.5241	8.66404
21400	21378	1031.14	1.0599	8.81511	2.7265	1.73409	3.5215	8.65765
21500	21478	1030.72	1.0592	8.80937	2.7341	1.73890	3.5189	8.65125
21600	21578	1030.31	1.0586	8.80362	2.7417	1.74374	3.5162	8.64485
21700	21677	1029.89	1.0579	8.79787	2.7493	1.74858	3.5136	8.63845
21800	21777	1029.48	1.0572	8.79212	2.7570	1.75345	3.5110	8.63205
21900	21877	1029.06	1.0565	8.78637	2.7646	1.75833	3.5084	8.62565
22000	21977	1028.65	1.0558 - 5	8.78062 - 1	2.7723 - 4	1.76323 + 0	3.5058 - 6	8.61925 - 1
22100	22077	1028.23	1.0551	8.77486	2.7801	1.76815	3.5032	8.61284
22200	22176	1027.82	1.0544	8.76910	2.7878	1.77309	3.5006	8.60644
22300	22276	1027.40	1.0537	8.76334	2.7956	1.77804	3.4980	8.60003
22400	22376	1026.98	1.0530	8.75758	2.8034	1.78301	3.4954	8.59362
22500	22476	1026.57	1.0523	8.75181	2.8113	1.78800	3.4928	8.58721
22600	22576	1026.15	1.0516	8.74605	2.8192	1.79301	3.4902	8.58080
22700	22675	1025.73	1.0509	8.74028	2.8271	1.79803	3.4876	8.57439
22800	22775	1025.32	1.0502	8.73451	2.8350	1.80307	3.4850	8.56798
22900	22875	1024.90	1.0495	8.72873	2.8429	1.80813	3.4824	8.56157

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
23000	23025	1024.38	1.0487 - 5	8.72149 - 1	2.8530 - 4	1.81450 + 0	3.4791 - 6	8.55352 - 1
23100	23126	1023.96	1.0480	8.71570	2.8610	1.81961	3.4765	8.54709
23200	23226	1023.54	1.0473	8.70991	2.8691	1.82474	3.4739	8.54066
23300	23326	1023.12	1.0466	8.70412	2.8771	1.82989	3.4713	8.53423
23400	23426	1022.70	1.0459	8.69832	2.8853	1.83506	3.4686	8.52780
23500	23527	1022.28	1.0452	8.69252	2.8934	1.84024	3.4660	8.52136
23600	23627	1021.86	1.0445	8.68672	2.9016	1.84545	3.4634	8.51492
23700	23727	1021.44	1.0438	8.68092	2.9098	1.85067	3.4608	8.50849
23800	23827	1021.02	1.0431	8.67511	2.9181	1.85591	3.4582	8.50205
23900	23927	1020.60	1.0424	8.66930	2.9263	1.86117	3.4555	8.49561
24000	24028	1020.18	1.0417 - 5	8.66349 - 1	2.9346 - 4	1.86645 + 0	3.4529 - 6	8.48917 - 1
24100	24128	1019.76	1.0410	8.65768	2.9430	1.87175	3.4503	8.48272
24200	24228	1019.34	1.0403	8.65187	2.9513	1.87707	3.4477	8.47628
24300	24328	1018.92	1.0396	8.64605	2.9597	1.88240	3.4451	8.46983
24400	24429	1018.50	1.0389	8.64023	2.9681	1.88776	3.4424	8.46339
24500	24529	1018.08	1.0382	8.63441	2.9766	1.89314	3.4398	8.45694
24600	24629	1017.66	1.0375	8.62859	2.9851	1.89853	3.4372	8.45049
24700	24729	1017.24	1.0368	8.62276	2.9936	1.90395	3.4346	8.44404
24800	24830	1016.82	1.0361	8.61694	3.0021	1.90938	3.4319	8.43759
24900	24930	1016.40	1.0354	8.61111	3.0107	1.91484	3.4293	8.43114
25000	25030	1015.98	1.0347 - 5	8.60528 - 1	3.0193 - 4	1.92031 + 0	3.4267 - 6	8.42469 - 1
25100	25130	1015.55	1.0340	8.59944	3.0280	1.92580	3.4241	8.41823
25200	25230	1015.13	1.0333	8.59361	3.0366	1.93132	3.4214	8.41177
25300	25331	1014.71	1.0326	8.58777	3.0453	1.93685	3.4188	8.40532
25400	25431	1014.29	1.0319	8.58193	3.0541	1.94241	3.4162	8.39886
25500	25531	1013.86	1.0312	8.57609	3.0628	1.94798	3.4136	8.39240
25600	25631	1013.44	1.0305	8.57024	3.0716	1.95358	3.4109	8.38594
25700	25732	1013.02	1.0298	8.56440	3.0804	1.95919	3.4083	8.37948
25800	25832	1012.60	1.0291	8.55855	3.0893	1.96483	3.4057	8.37301
25900	25932	1012.17	1.0284	8.55270	3.0982	1.97048	3.4031	8.36655
26000	26032	1011.75	1.0277 - 5	8.54685 - 1	3.1071 - 4	1.97616 + 0	3.4004 - 6	8.36008 - 1
26100	26133	1011.33	1.0270	8.54099	3.1161	1.98186	3.3978	8.35362
26200	26233	1010.90	1.0263	8.53513	3.1251	1.98758	3.3952	8.34715
26300	26333	1010.48	1.0256	8.52927	3.1341	1.99332	3.3925	8.34068
26400	26433	1010.05	1.0249	8.52341	3.1432	1.99908	3.3899	8.33421
26500	26534	1009.63	1.0242	8.51755	3.1523	2.00486	3.3873	8.32773
26600	26634	1009.20	1.0235	8.51168	3.1614	2.01067	3.3846	8.32126
26700	26734	1008.78	1.0227	8.50581	3.1705	2.01649	3.3820	8.31479
26800	26834	1008.36	1.0220	8.49994	3.1797	2.02234	3.3794	8.30831
26900	26935	1007.93	1.0213	8.49407	3.1890	2.02821	3.3767	8.30183
27000	27035	1007.51	1.0206 - 5	8.48819 - 1	3.1982 - 4	2.03410 + 0	3.3741 - 6	8.29536 - 1
27100	27135	1007.08	1.0199	8.48232	3.2075	2.04001	3.3715	8.28888
27200	27236	1006.65	1.0192	8.47644	3.2168	2.04594	3.3688	8.28240
27300	27336	1006.23	1.0185	8.47056	3.2262	2.05190	3.3662	8.27592
27400	27436	1005.80	1.0178	8.46467	3.2356	2.05787	3.3635	8.26943
27500	27536	1005.38	1.0171	8.45879	3.2450	2.06387	3.3609	8.26295
27600	27637	1004.95	1.0164	8.45290	3.2545	2.06990	3.3583	8.25646
27700	27737	1004.52	1.0157	8.44701	3.2640	2.07594	3.3556	8.24998
27800	27837	1004.10	1.0150	8.44111	3.2736	2.08201	3.3530	8.24349
27900	27937	1003.67	1.0143	8.43522	3.2831	2.08810	3.3504	8.23700
28000	28038	1003.24	1.0135 - 5	8.42932 - 1	3.2927 - 4	2.09421 + 0	3.3477 - 6	8.23051 - 1
28100	28138	1002.82	1.0128	8.42342	3.3024	2.10034	3.3451	8.22402
28200	28238	1002.39	1.0121	8.41752	3.3121	2.10650	3.3424	8.21752
28300	28338	1001.96	1.0114	8.41162	3.3218	2.11268	3.3398	8.21103
28400	28439	1001.53	1.0107	8.40571	3.3315	2.11889	3.3372	8.20454
28500	28539	1001.11	1.0100	8.39980	3.3413	2.12511	3.3345	8.19804
28600	28639	1000.68	1.0093	8.39389	3.3512	2.13136	3.3319	8.19154
28700	28740	1000.25	1.0086	8.38798	3.3610	2.13764	3.3292	8.18504
28800	28840	999.82	1.0079	8.38206	3.3709	2.14394	3.3266	8.17854
28900	28940	999.39	1.0072	8.37615	3.3809	2.15026	3.3239	8.17204
29000	29040	998.96	1.0064 - 5	8.37023 - 1	3.3908 - 4	2.15660 + 0	3.3213 - 6	8.16554 - 1
29100	29141	998.53	1.0057	8.36430	3.4009	2.16297	3.3186	8.15903
29200	29241	998.10	1.0050	8.35838	3.4109	2.16936	3.3160	8.15253
29300	29341	997.67	1.0043	8.35245	3.4210	2.17578	3.3134	8.14602
29400	29442	997.25	1.0036	8.34652	3.4311	2.18222	3.3107	8.13952
29500	29542	996.82	1.0029	8.34059	3.4413	2.18869	3.3081	8.13301
29600	29642	996.39	1.0022	8.33466	3.4515	2.19518	3.3054	8.12650
29700	29742	995.96	1.0015	8.32873	3.4617	2.20169	3.3028	8.11999
29800	29843	995.53	1.0007	8.32279	3.4720	2.20823	3.3001	8.11347
29900	29943	995.09	1.0000	8.31685	3.4823	2.21479	3.2975	8.10696
30000	30043	994.66	9.9931 - 6	8.31091 - 1	3.4927 - 4	2.22138 + 0	3.2948 - 6	8.10045 - 1
30100	30144	994.23	9.9859	8.30496	3.5031	2.22799	3.2922	8.09393
30200	30244	993.80	9.9788	8.29901	3.5135	2.23463	3.2895	8.08741
30300	30344	993.37	9.9716	8.29307	3.5240	2.24129	3.2869	8.08090
30400	30444	992.94	9.9645	8.28711	3.5345	2.24798	3.2842	8.07438
30500	30545	992.51	9.9573	8.28116	3.5451	2.25470	3.2816	8.06785
30600	30645	992.08	9.9502	8.27520	3.5557	2.26144	3.2789	8.06133
30700	30745	991.64	9.9430	8.26925	3.5663	2.26820	3.2763	8.05481
30800	30846	991.21	9.9358	8.26329	3.5770	2.27499	3.2736	8.04828
30900	30946	990.78	9.9287	8.25732	3.5877	2.28181	3.2709	8.04176

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
23000	22975	1024.48	1.0489 - 5	8.72296 - 1	2.8509 - 4	1.81321 + 0	3.4798 - 6	8.55515 - 1
23100	23074	1024.06	1.0482	8.71718	2.8589	1.81830	3.4772	8.54874
23200	23174	1023.65	1.0475	8.71140	2.8670	1.82342	3.4745	8.54232
23300	23274	1023.23	1.0468	8.70562	2.8750	1.82855	3.4719	8.53590
23400	23374	1022.81	1.0461	8.69984	2.8831	1.83370	3.4693	8.52948
23500	23474	1022.39	1.0454	8.69405	2.8913	1.83887	3.4667	8.52306
23600	23573	1021.98	1.0447	8.68827	2.8994	1.84406	3.4641	8.51664
23700	23673	1021.56	1.0440	8.68248	2.9076	1.84926	3.4615	8.51022
23800	23773	1021.14	1.0433	8.67669	2.9158	1.85449	3.4589	8.50379
23900	23873	1020.72	1.0426	8.67089	2.9241	1.85973	3.4563	8.49737
24000	23972	1020.30	1.0419 - 5	8.66510 - 1	2.9323 - 4	1.86499 + 0	3.4536 - 6	8.49094 - 1
24100	24072	1019.88	1.0412	8.65930	2.9406	1.87027	3.4510	8.48452
24200	24172	1019.46	1.0405	8.65350	2.9490	1.87557	3.4484	8.47809
24300	24272	1019.04	1.0398	8.64770	2.9573	1.88089	3.4458	8.47166
24400	24371	1018.62	1.0391	8.64189	2.9657	1.88623	3.4432	8.46523
24500	24471	1018.20	1.0384	8.63609	2.9742	1.89159	3.4406	8.45879
24600	24571	1017.78	1.0377	8.63028	2.9826	1.89697	3.4380	8.45236
24700	24671	1017.36	1.0370	8.62447	2.9911	1.90236	3.4353	8.44593
24800	24771	1016.94	1.0363	8.61865	2.9996	1.90778	3.4327	8.43949
24900	24870	1016.52	1.0356	8.61284	3.0082	1.91321	3.4301	8.43306
25000	24970	1016.10	1.0349 - 5	8.60702 - 1	3.0167 - 4	1.91867 + 0	3.4275 - 6	8.42662 - 1
25100	25070	1015.68	1.0342	8.60120	3.0253	1.92414	3.4249	8.42018
25200	25170	1015.26	1.0335	8.59538	3.0340	1.92964	3.4222	8.41374
25300	25269	1014.84	1.0328	8.58956	3.0427	1.93515	3.4196	8.40730
25400	25369	1014.42	1.0321	8.58374	3.0514	1.94069	3.4170	8.40085
25500	25469	1014.00	1.0314	8.57791	3.0601	1.94624	3.4144	8.39441
25600	25569	1013.57	1.0307	8.57208	3.0689	1.95182	3.4118	8.38797
25700	25668	1013.15	1.0300	8.56625	3.0777	1.95741	3.4091	8.38152
25800	25768	1012.73	1.0293	8.56041	3.0865	1.96303	3.4065	8.37507
25900	25868	1012.31	1.0286	8.55458	3.0953	1.96866	3.4039	8.36863
26000	25968	1011.89	1.0279 - 5	8.54874 - 1	3.1042 - 4	1.97432 + 0	3.4013 - 6	8.36218 - 1
26100	26067	1011.46	1.0272	8.54290	3.1132	1.98000	3.3986	8.35573
26200	26167	1011.04	1.0265	8.53706	3.1221	1.98570	3.3960	8.34927
26300	26267	1010.62	1.0258	8.53121	3.1311	1.99141	3.3934	8.34282
26400	26367	1010.20	1.0251	8.52537	3.1401	1.99715	3.3908	8.33637
26500	26466	1009.77	1.0244	8.51952	3.1492	2.00291	3.3881	8.32991
26600	26566	1009.35	1.0237	8.51367	3.1583	2.00870	3.3855	8.32346
26700	26666	1008.93	1.0230	8.50782	3.1674	2.01450	3.3829	8.31700
26800	26766	1008.50	1.0223	8.50196	3.1766	2.02032	3.3803	8.31054
26900	26865	1008.08	1.0216	8.49610	3.1858	2.02617	3.3776	8.30408
27000	26965	1007.65	1.0209 - 5	8.49024 - 1	3.1950 - 4	2.03204 + 0	3.3750 - 6	8.29762 - 1
27100	27065	1007.23	1.0202	8.48438	3.2042	2.03793	3.3724	8.29116
27200	27165	1006.80	1.0195	8.47852	3.2135	2.04384	3.3698	8.28469
27300	27264	1006.38	1.0188	8.47265	3.2229	2.04977	3.3671	8.27823
27400	27364	1005.96	1.0181	8.46679	3.2322	2.05572	3.3645	8.27176
27500	27464	1005.53	1.0173	8.46092	3.2416	2.06170	3.3619	8.26530
27600	27564	1005.11	1.0166	8.45505	3.2511	2.06770	3.3592	8.25883
27700	27663	1004.68	1.0159	8.44917	3.2605	2.07372	3.3566	8.25236
27800	27763	1004.25	1.0152	8.44329	3.2700	2.07976	3.3540	8.24589
27900	27863	1003.83	1.0145	8.43742	3.2796	2.08582	3.3513	8.23942
28000	27962	1003.40	1.0138 - 5	8.43154 - 1	3.2891 - 4	2.09191 + 0	3.3487 - 6	8.23295 - 1
28100	28062	1002.98	1.0131	8.42565	3.2987	2.09802	3.3461	8.22647
28200	28162	1002.55	1.0124	8.41977	3.3084	2.10415	3.3434	8.22000
28300	28262	1002.12	1.0117	8.41388	3.3181	2.11031	3.3408	8.21352
28400	28361	1001.70	1.0110	8.40799	3.3278	2.11649	3.3382	8.20704
28500	28461	1001.27	1.0103	8.40210	3.3375	2.12269	3.3355	8.20057
28600	28561	1000.84	1.0096	8.39621	3.3473	2.12891	3.3329	8.19409
28700	28661	1000.42	1.0089	8.39031	3.3571	2.13516	3.3303	8.18761
28800	28760	999.99	1.0081	8.38441	3.3670	2.14143	3.3276	8.18112
28900	28860	999.56	1.0074	8.37851	3.3769	2.14773	3.3250	8.17464
29000	28960	999.14	1.0067 - 5	8.37261 - 1	3.3868 - 4	2.15404 + 0	3.3224 - 6	8.16816 - 1
29100	29059	998.71	1.0060	8.36671	3.3968	2.16038	3.3197	8.16167
29200	29159	998.28	1.0053	8.36080	3.4068	2.16675	3.3171	8.15519
29300	29259	997.85	1.0046	8.35489	3.4168	2.17314	3.3144	8.14870
29400	29359	997.42	1.0039	8.34898	3.4269	2.17955	3.3118	8.14221
29500	29458	996.99	1.0032	8.34307	3.4370	2.18599	3.3092	8.13572
29600	29558	996.57	1.0025	8.33715	3.4472	2.19245	3.3065	8.12923
29700	29658	996.14	1.0018	8.33123	3.4574	2.19894	3.3039	8.12274
29800	29757	995.71	1.0010	8.32531	3.4676	2.20544	3.3012	8.11624
29900	29857	995.28	1.0003	8.31939	3.4779	2.21198	3.2986	8.10975
30000	29957	994.85	9.9962 - 6	8.31347 - 1	3.4882 - 4	2.21854 + 0	3.2960 - 6	8.10325 - 1
30100	30057	994.42	9.9991	8.30754	3.4986	2.22512	3.2933	8.09676
30200	30156	993.99	9.9919	8.30161	3.5090	2.23173	3.2907	8.09026
30300	30256	993.56	9.9748	8.29568	3.5194	2.23836	3.2880	8.08376
30400	30356	993.13	9.9677	8.28975	3.5299	2.24502	3.2854	8.07726
30500	30455	992.70	9.9605	8.28381	3.5404	2.25170	3.2827	8.07076
30600	30555	992.27	9.9534	8.27788	3.5509	2.25841	3.2801	8.06426
30700	30655	991.84	9.9462	8.27194	3.5615	2.26515	3.2774	8.05775
30800	30755	991.41	9.9391	8.26599	3.5721	2.27191	3.2748	8.05125
30900	30854	990.98	9.9319	8.26005	3.5828	2.27869	3.2722	8.04474



TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	$C_s$ , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	$k$ , BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
31000	31046	990.35	9.9215 - 6	8.25136 - 1	3.5985 - 4	2.28866 + 0	3.2683 - 6	8.03523 - 1
31100	31146	989.91	9.9143	8.24539	3.6093	2.29552	3.2656	8.02870
31200	31247	989.48	9.9071	8.23942	3.6201	2.30242	3.2630	8.02217
31300	31347	989.05	9.9000	8.23345	3.6310	2.30934	3.2603	8.01564
31400	31447	988.61	9.8928	8.22748	3.6419	2.31629	3.2577	8.00911
31500	31548	988.18	9.8856	8.22150	3.6529	2.32327	3.2550	8.00258
31600	31648	987.75	9.8784	8.21552	3.6639	2.33027	3.2524	7.99605
31700	31748	987.31	9.8712	8.20954	3.6749	2.33730	3.2497	7.98951
31800	31849	986.88	9.8640	8.20356	3.6860	2.34435	3.2470	7.98297
31900	31949	986.44	9.8568	8.19757	3.6972	2.35144	3.2444	7.97644
32000	32049	986.01	9.8496 - 6	8.19158 - 1	3.7084 - 4	2.35855 + 0	3.2417 - 6	7.96990 - 1
32100	32149	985.58	9.8424	8.18559	3.7196	2.36568	3.2391	7.96336
32200	32250	985.14	9.8352	8.17960	3.7308	2.37285	3.2364	7.95681
32300	32350	984.71	9.8280	8.17361	3.7422	2.38004	3.2337	7.95027
32400	32450	984.27	9.8208	8.16761	3.7535	2.38726	3.2311	7.94373
32500	32551	983.83	9.8136	8.16161	3.7649	2.39451	3.2284	7.93718
32600	32651	983.40	9.8064	8.15561	3.7763	2.40179	3.2257	7.93064
32700	32751	982.96	9.7991	8.14960	3.7878	2.40909	3.2231	7.92409
32800	32852	982.53	9.7919	8.14360	3.7994	2.41642	3.2204	7.91754
32900	32952	982.09	9.7847	8.13759	3.8109	2.42379	3.2178	7.91099
33000	33052	981.65	9.7775 - 6	8.13158 - 1	3.8226 - 4	2.43118 + 0	3.2151 - 6	7.90444 - 1
33100	33153	981.22	9.7702	8.12556	3.8342	2.43859	3.2124	7.89789
33200	33253	980.78	9.7630	8.11955	3.8459	2.44604	3.2098	7.89133
33300	33353	980.34	9.7558	8.11353	3.8577	2.45352	3.2071	7.88478
33400	33454	979.91	9.7485	8.10751	3.8695	2.46102	3.2044	7.87822
33500	33554	979.47	9.7413	8.10149	3.8813	2.46856	3.2018	7.87166
33600	33654	979.03	9.7340	8.09546	3.8932	2.47612	3.1991	7.86511
33700	33755	978.59	9.7268	8.08943	3.9052	2.48372	3.1964	7.85855
33800	33855	978.16	9.7195	8.08340	3.9172	2.49134	3.1938	7.85199
33900	33955	977.72	9.7123	8.07737	3.9292	2.49899	3.1911	7.84542
34000	34056	977.28	9.7050 - 6	8.07134 - 1	3.9413 - 4	2.50668 + 0	3.1884 - 6	7.83886 - 1
34100	34156	976.84	9.6978	8.06530	3.9534	2.51439	3.1857	7.83230
34200	34256	976.40	9.6905	8.05926	3.9656	2.52213	3.1831	7.82573
34300	34357	975.96	9.6833	8.05322	3.9778	2.52991	3.1804	7.81916
34400	34457	975.52	9.6760	8.04718	3.9901	2.53771	3.1777	7.81259
34500	34557	975.08	9.6687	8.04113	4.0024	2.54555	3.1751	7.80603
34600	34658	974.65	9.6614	8.03508	4.0147	2.55341	3.1724	7.79945
34700	34758	974.21	9.6542	8.02903	4.0272	2.56131	3.1697	7.79288
34800	34858	973.77	9.6469	8.02298	4.0396	2.56924	3.1670	7.78631
34900	34959	973.33	9.6396	8.01692	4.0521	2.57720	3.1644	7.77974
35000	35059	972.89	9.6323 - 6	8.01086 - 1	4.0647 - 4	2.58519 + 0	3.1617 - 6	7.77316 - 1
35200	35260	972.00	9.6177	7.99874	4.0900	2.60127	3.1563	7.76001
35400	35460	971.12	9.6032	7.98661	4.1155	2.61747	3.1510	7.74685
35600	35661	970.24	9.5886	7.97447	4.1411	2.63380	3.1456	7.73368
35800	35862	969.36	9.5739	7.96231	4.1670	2.65027	3.1403	7.72051
36000	36062	968.47	9.5593	7.95015	4.1931	2.66686	3.1349	7.70734
36200	36263	968.08	9.5528	7.94472	4.2273	2.68358	3.1325	7.70146
36400	36464	968.08	9.5528	7.94472	4.2681	2.71455	3.1325	7.70146
36600	36664	968.08	9.5528	7.94472	4.3093	2.74077	3.1325	7.70146
36800	36865	968.08	9.5528	7.94472	4.3510	2.76725	3.1325	7.70146
37000	37066	968.08	9.5528 - 6	7.94472 - 1	4.3930 - 4	2.79397 + 0	3.1325 - 6	7.70146 - 1
37200	37266	968.08	9.5528	7.94472	4.4354	2.82096	3.1325	7.70146
37400	37467	968.08	9.5528	7.94472	4.4783	2.84821	3.1325	7.70146
37600	37668	968.08	9.5528	7.94472	4.5215	2.87572	3.1325	7.70146
37800	37869	968.08	9.5528	7.94472	4.5652	2.90350	3.1325	7.70146
38000	38069	968.08	9.5528	7.94472	4.6093	2.93154	3.1325	7.70146
38200	38270	968.08	9.5528	7.94472	4.6538	2.95986	3.1325	7.70146
38400	38471	968.08	9.5528	7.94472	4.6988	2.98845	3.1325	7.70146
38600	38672	968.08	9.5528	7.94472	4.7441	3.01731	3.1325	7.70146
38800	38872	968.08	9.5528	7.94472	4.7900	3.04646	3.1325	7.70146
39000	39073	968.08	9.5528 - 6	7.94472 - 1	4.8362 - 4	3.07588 + 0	3.1325 - 6	7.70146 - 1
39200	39274	968.08	9.5528	7.94472	4.8829	3.10559	3.1325	7.70146
39400	39475	968.08	9.5528	7.94472	4.9301	3.13559	3.1325	7.70146
39600	39675	968.08	9.5528	7.94472	4.9777	3.16588	3.1325	7.70146
39800	39876	968.08	9.5528	7.94472	5.0258	3.19646	3.1325	7.70146
40000	40077	968.08	9.5528	7.94472	5.0744	3.22733	3.1325	7.70146
40200	40278	968.08	9.5528	7.94472	5.1234	3.25850	3.1325	7.70146
40400	40478	968.08	9.5528	7.94472	5.1729	3.28998	3.1325	7.70146
40600	40679	968.08	9.5528	7.94472	5.2228	3.32176	3.1325	7.70146
40800	40880	968.08	9.5528	7.94472	5.2733	3.35384	3.1325	7.70146
41000	41081	968.08	9.5528 - 6	7.94472 - 1	5.3242 - 4	3.38624 + 0	3.1325 - 6	7.70146 - 1
41200	41282	968.08	9.5528	7.94472	5.3756	3.41894	3.1325	7.70146
41400	41482	968.08	9.5528	7.94472	5.4275	3.45197	3.1325	7.70146
41600	41683	968.08	9.5528	7.94472	5.4800	3.48531	3.1325	7.70146
41800	41884	968.08	9.5528	7.94472	5.5329	3.51898	3.1325	7.70146
42000	42085	968.08	9.5528	7.94472	5.5863	3.55297	3.1325	7.70146
42200	42286	968.08	9.5528	7.94472	5.6403	3.58728	3.1325	7.70146
42400	42486	968.08	9.5528	7.94472	5.6948	3.62193	3.1325	7.70146
42600	42687	968.08	9.5528	7.94472	5.7498	3.65692	3.1325	7.70146
42800	42888	968.08	9.5528	7.94472	5.8053	3.69224	3.1325	7.70146

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
31000	30954	990.55	9.9248 - 6	8.25410 - 1	3.5935 - 4	2.28550 + 0	3.2695 - 6	8.03824 - 1
31100	31054	990.11	9.9176	8.24816	3.6043	2.29234	3.2669	8.03173
31200	31153	989.68	9.9105	8.24220	3.6151	2.29920	3.2642	8.02522
31300	31253	989.25	9.9033	8.23625	3.6259	2.30609	3.2616	8.01871
31400	31353	988.82	9.8962	8.23030	3.6368	2.31301	3.2589	8.01220
31500	31452	988.39	9.8890	8.22434	3.6477	2.31995	3.2563	8.00568
31600	31552	987.95	9.8818	8.21838	3.6586	2.32692	3.2536	7.99917
31700	31652	987.52	9.8747	8.21242	3.6696	2.33391	3.2510	7.99265
31800	31752	987.09	9.8675	8.20645	3.6807	2.34093	3.2483	7.98614
31900	31851	986.66	9.8603	8.20049	3.6917	2.34798	3.2457	7.97962
32000	31951	986.22	9.8532 - 6	8.19452 - 1	3.7029 - 4	2.35506 + 0	3.2430 - 6	7.97310 - 1
32100	32051	985.79	9.8460	8.18855	3.7140	2.36216	3.2404	7.96658
32200	32150	985.36	9.8388	8.18258	3.7252	2.36929	3.2377	7.96006
32300	32250	984.92	9.8316	8.17660	3.7365	2.37644	3.2351	7.95354
32400	32350	984.49	9.8244	8.17062	3.7478	2.38363	3.2324	7.94702
32500	32449	984.05	9.8172	8.16464	3.7591	2.39084	3.2298	7.94049
32600	32549	983.62	9.8100	8.15866	3.7705	2.39808	3.2271	7.93397
32700	32649	983.19	9.8028	8.15268	3.7819	2.40535	3.2244	7.92744
32800	32748	982.75	9.7956	8.14669	3.7934	2.41264	3.2218	7.92091
32900	32848	982.32	9.7884	8.14070	3.8049	2.41997	3.2191	7.91438
33000	32948	981.88	9.7812 - 6	8.13471 - 1	3.8165 - 4	2.42732 + 0	3.2165 - 6	7.90785 - 1
33100	33048	981.45	9.7740	8.12872	3.8281	2.43470	3.2138	7.90132
33200	33147	981.01	9.7668	8.12272	3.8397	2.44211	3.2112	7.89479
33300	33247	980.58	9.7596	8.11672	3.8514	2.44955	3.2085	7.88826
33400	33347	980.14	9.7524	8.11072	3.8632	2.45701	3.2059	7.88172
33500	33446	979.70	9.7452	8.10472	3.8750	2.46451	3.2032	7.87519
33600	33546	979.27	9.7380	8.09872	3.8868	2.47203	3.2005	7.86865
33700	33646	978.83	9.7307	8.09271	3.8987	2.47958	3.1979	7.86211
33800	33745	978.40	9.7235	8.08670	3.9106	2.48717	3.1952	7.85557
33900	33845	977.96	9.7163	8.08069	3.9226	2.49478	3.1926	7.84903
34000	33945	977.52	9.7091 - 6	8.07468 - 1	3.9346 - 4	2.50242 + 0	3.1899 - 6	7.84249 - 1
34100	34044	977.09	9.7018	8.06866	3.9466	2.51009	3.1872	7.83595
34200	34144	976.65	9.6946	8.06264	3.9587	2.51779	3.1846	7.82941
34300	34244	976.21	9.6873	8.05662	3.9709	2.52553	3.1819	7.82286
34400	34343	975.77	9.6801	8.05060	3.9831	2.53329	3.1792	7.81632
34500	34443	975.34	9.6729	8.04458	3.9954	2.54108	3.1766	7.80977
34600	34543	974.90	9.6656	8.03855	4.0077	2.54890	3.1739	7.80322
34700	34642	974.46	9.6584	8.03252	4.0200	2.55676	3.1713	7.79667
34800	34742	974.02	9.6511	8.02649	4.0324	2.56464	3.1686	7.79012
34900	34842	973.58	9.6439	8.02045	4.0448	2.57255	3.1659	7.78357
35000	34941	973.14	9.6366 - 6	8.01442 - 1	4.0573 - 4	2.58050 + 0	3.1633 - 6	7.77702 - 1
35200	35141	972.27	9.6221	8.00234	4.0825	2.59449	3.1579	7.76391
35400	35340	971.39	9.6075	7.99025	4.1078	2.61260	3.1526	7.75079
35600	35539	970.51	9.5930	7.97815	4.1333	2.62884	3.1473	7.73768
35800	35739	969.63	9.5784	7.96604	4.1591	2.64520	3.1419	7.72455
36000	35938	968.74	9.5639	7.95393	4.1850	2.66170	3.1366	7.71143
36200	36137	968.08	9.5528	7.94472	4.2145	2.68049	3.1325	7.70146
36400	36337	968.08	9.5528	7.94472	4.2551	2.70629	3.1325	7.70146
36600	36536	968.08	9.5528	7.94472	4.2961	2.73234	3.1325	7.70146
36800	36735	968.08	9.5528	7.94472	4.3374	2.75864	3.1325	7.70146
37000	36934	968.08	9.5528 - 6	7.94472 - 1	4.3792 - 4	2.78519 + 0	3.1325 - 6	7.70146 - 1
37200	37134	968.08	9.5528	7.94472	4.4213	2.81199	3.1325	7.70146
37400	37333	968.08	9.5528	7.94472	4.4639	2.83906	3.1325	7.70146
37600	37532	968.08	9.5528	7.94472	4.5068	2.86638	3.1325	7.70146
37800	37732	968.08	9.5528	7.94472	4.5502	2.89397	3.1325	7.70146
38000	37931	968.08	9.5528	7.94472	4.5940	2.92182	3.1325	7.70146
38200	38130	968.08	9.5528	7.94472	4.6382	2.94994	3.1325	7.70146
38400	38329	968.08	9.5528	7.94472	4.6828	2.97833	3.1325	7.70146
38600	38529	968.08	9.5528	7.94472	4.7279	3.00699	3.1325	7.70146
38800	38728	968.08	9.5528	7.94472	4.7734	3.03592	3.1325	7.70146
39000	38927	968.08	9.5528 - 6	7.94472 - 1	4.8193 - 4	3.06514 + 0	3.1325 - 6	7.70146 - 1
39200	39126	968.08	9.5528	7.94472	4.8657	3.09463	3.1325	7.70146
39400	39326	968.08	9.5528	7.94472	4.9125	3.12441	3.1325	7.70146
39600	39525	968.08	9.5528	7.94472	4.9598	3.15448	3.1325	7.70146
39800	39724	968.08	9.5528	7.94472	5.0075	3.18483	3.1325	7.70146
40000	39923	968.08	9.5528	7.94472	5.0557	3.21547	3.1325	7.70146
40200	40123	968.08	9.5528	7.94472	5.1044	3.24641	3.1325	7.70146
40400	40322	968.08	9.5528	7.94472	5.1535	3.27765	3.1325	7.70146
40600	40521	968.08	9.5528	7.94472	5.2031	3.30918	3.1325	7.70146
40800	40720	968.08	9.5528	7.94472	5.2531	3.34102	3.1325	7.70146
41000	40920	968.08	9.5528 - 6	7.94472 - 1	5.3037 - 4	3.37317 + 0	3.1325 - 6	7.70146 - 1
41200	41119	968.08	9.5528	7.94472	5.3547	3.40562	3.1325	7.70146
41400	41318	968.08	9.5528	7.94472	5.4062	3.43839	3.1325	7.70146
41600	41517	968.08	9.5528	7.94472	5.4582	3.47146	3.1325	7.70146
41800	41716	968.08	9.5528	7.94472	5.5107	3.50486	3.1325	7.70146
42000	41916	968.08	9.5528	7.94472	5.5637	3.53858	3.1325	7.70146
42200	42115	968.08	9.5528	7.94472	5.6173	3.57262	3.1325	7.70146
42400	42314	968.08	9.5528	7.94472	5.6713	3.60699	3.1325	7.70146
42600	42513	968.08	9.5528	7.94472	5.7258	3.64168	3.1325	7.70146
42800	42712	968.08	9.5528	7.94472	5.7809	3.67672	3.1325	7.70146

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
43000	43089	968.08	9.5528 - 6	7.94472 - 1	5.8614 - 4	3.72790 + 0	3.1325 - 6	7.70146 - 1
43200	43290	968.08	9.5528	7.94472	5.9180	3.76391	3.1325	7.70146
43400	43491	968.08	9.5528	7.94472	5.9752	3.80027	3.1325	7.70146
43600	43691	968.08	9.5528	7.94472	6.0329	3.83697	3.1325	7.70146
43800	43892	968.08	9.5528	7.94472	6.0912	3.87404	3.1325	7.70146
44000	44093	968.08	9.5528	7.94472	6.1500	3.91146	3.1325	7.70146
44200	44294	968.08	9.5528	7.94472	6.2094	3.94924	3.1325	7.70146
44400	44495	968.08	9.5528	7.94472	6.2694	3.98738	3.1325	7.70146
44600	44696	968.08	9.5528	7.94472	6.3299	4.02590	3.1325	7.70146
44800	44896	968.08	9.5528	7.94472	6.3911	4.06478	3.1325	7.70146
45000	45097	968.08	9.5528 - 6	7.94472 - 1	6.4528 - 4	4.10404 + 0	3.1325 - 6	7.70146 - 1
45200	45298	968.08	9.5528	7.94472	6.5151	4.14369	3.1325	7.70146
45400	45499	968.08	9.5528	7.94472	6.5781	4.18371	3.1325	7.70146
45600	45700	968.08	9.5528	7.94472	6.6416	4.22412	3.1325	7.70146
45800	45901	968.08	9.5528	7.94472	6.7058	4.26492	3.1325	7.70146
46000	46102	968.08	9.5528	7.94472	6.7705	4.30612	3.1325	7.70146
46200	46303	968.08	9.5528	7.94472	6.8359	4.34771	3.1325	7.70146
46400	46504	968.08	9.5528	7.94472	6.9020	4.38970	3.1325	7.70146
46600	46704	968.08	9.5528	7.94472	6.9686	4.43210	3.1325	7.70146
46800	46905	968.08	9.5528	7.94472	7.0359	4.47491	3.1325	7.70146
47000	47106	968.08	9.5528 - 6	7.94472 - 1	7.1039 - 4	4.51814 + 0	3.1325 - 6	7.70146 - 1
47200	47307	968.08	9.5528	7.94472	7.1725	4.56178	3.1325	7.70146
47400	47508	968.08	9.5528	7.94472	7.2418	4.60584	3.1325	7.70146
47600	47709	968.08	9.5528	7.94472	7.3117	4.65033	3.1325	7.70146
47800	47910	968.08	9.5528	7.94472	7.3824	4.69525	3.1325	7.70146
48000	48111	968.08	9.5528	7.94472	7.4537	4.74060	3.1325	7.70146
48200	48312	968.08	9.5528	7.94472	7.5257	4.78639	3.1325	7.70146
48400	48513	968.08	9.5528	7.94472	7.5984	4.83262	3.1325	7.70146
48600	48714	968.08	9.5528	7.94472	7.6718	4.87930	3.1325	7.70146
48800	48914	968.08	9.5528	7.94472	7.7459	4.92643	3.1325	7.70146
49000	49115	968.08	9.5528 - 6	7.94472 - 1	7.8207 - 4	4.97401 + 0	3.1325 - 6	7.70146 - 1
49200	49316	968.08	9.5528	7.94472	7.8962	5.02206	3.1325	7.70146
49400	49517	968.08	9.5528	7.94472	7.9725	5.07057	3.1325	7.70146
49600	49718	968.08	9.5528	7.94472	8.0495	5.11954	3.1325	7.70146
49800	49919	968.08	9.5528	7.94472	8.1272	5.16899	3.1325	7.70146
50000	50120	968.08	9.5528	7.94472	8.2057	5.21892	3.1325	7.70146
50200	50321	968.08	9.5528	7.94472	8.2850	5.26933	3.1325	7.70146
50400	50522	968.08	9.5528	7.94472	8.3650	5.32023	3.1325	7.70146
50600	50723	968.08	9.5528	7.94472	8.4458	5.37161	3.1325	7.70146
50800	50924	968.08	9.5528	7.94472	8.5274	5.42350	3.1325	7.70146
51000	51125	968.08	9.5528 - 6	7.94472 - 1	8.6098 - 4	5.47589 + 0	3.1325 - 6	7.70146 - 1
51200	51326	968.08	9.5528	7.94472	8.6929	5.52878	3.1325	7.70146
51400	51527	968.08	9.5528	7.94472	8.7769	5.58218	3.1325	7.70146
51600	51728	968.08	9.5528	7.94472	8.8617	5.63610	3.1325	7.70146
51800	51929	968.08	9.5528	7.94472	8.9473	5.69054	3.1325	7.70146
52000	52130	968.08	9.5528	7.94472	9.0337	5.74550	3.1325	7.70146
52200	52331	968.08	9.5528	7.94472	9.1209	5.80100	3.1325	7.70146
52400	52532	968.08	9.5528	7.94472	9.2090	5.85703	3.1325	7.70146
52600	52733	968.08	9.5528	7.94472	9.2980	5.91360	3.1325	7.70146
52800	52934	968.08	9.5528	7.94472	9.3878	5.97072	3.1325	7.70146
53000	53135	968.08	9.5528 - 6	7.94472 - 1	9.4785 - 4	6.02840 + 0	3.1325 - 6	7.70146 - 1
53200	53336	968.08	9.5528	7.94472	9.5700	6.08662	3.1325	7.70146
53400	53537	968.08	9.5528	7.94472	9.6625	6.14541	3.1325	7.70146
53600	53738	968.08	9.5528	7.94472	9.7558	6.20477	3.1325	7.70146
53800	53939	968.08	9.5528	7.94472	9.8500	6.26471	3.1325	7.70146
54000	54140	968.08	9.5528	7.94472	9.9452	6.32522	3.1325	7.70146
54200	54341	968.08	9.5528	7.94472	1.0041 - 3	6.38631	3.1325	7.70146
54400	54542	968.08	9.5528	7.94472	1.0138	6.44800	3.1325	7.70146
54600	54743	968.08	9.5528	7.94472	1.0236	6.51028	3.1325	7.70146
54800	54944	968.08	9.5528	7.94472	1.0335	6.57316	3.1325	7.70146
55000	55145	968.08	9.5528 - 6	7.94472 - 1	1.0435 - 3	6.63665 + 0	3.1325 - 6	7.70146 - 1
55200	55347	968.08	9.5528	7.94472	1.0536	6.70076	3.1325	7.70146
55400	55548	968.08	9.5528	7.94472	1.0637	6.76548	3.1325	7.70146
55600	55749	968.08	9.5528	7.94472	1.0740	6.83083	3.1325	7.70146
55800	55950	968.08	9.5528	7.94472	1.0844	6.89681	3.1325	7.70146
56000	56151	968.08	9.5528	7.94472	1.0949	6.96342	3.1325	7.70146
56200	56352	968.08	9.5528	7.94472	1.1054	7.03068	3.1325	7.70146
56400	56553	968.08	9.5528	7.94472	1.1161	7.09859	3.1325	7.70146
56600	56754	968.08	9.5528	7.94472	1.1269	7.16716	3.1325	7.70146
56800	56955	968.08	9.5528	7.94472	1.1378	7.23639	3.1325	7.70146
57000	57156	968.08	9.5528 - 6	7.94472 - 1	1.1488 - 3	7.30628 + 0	3.1325 - 6	7.70146 - 1
57200	57357	968.08	9.5528	7.94472	1.1599	7.37685	3.1325	7.70146
57400	57558	968.08	9.5528	7.94472	1.1711	7.44811	3.1325	7.70146
57600	57760	968.08	9.5528	7.94472	1.1824	7.52005	3.1325	7.70146
57800	57961	968.08	9.5528	7.94472	1.1938	7.59269	3.1325	7.70146
58000	58162	968.08	9.5528	7.94472	1.2053	7.66602	3.1325	7.70146
58200	58363	968.08	9.5528	7.94472	1.2170	7.74007	3.1325	7.70146
58400	58564	968.08	9.5528	7.94472	1.2287	7.81483	3.1325	7.70146
58600	58765	968.08	9.5528	7.94472	1.2406	7.89032	3.1325	7.70146
58800	58966	968.08	9.5528	7.94472	1.2526	7.96653	3.1325	7.70146

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
43000	42912	968.08	9.5528 - 6	7.94472 - 1	5.8365 - 4	3.71208 + 0	3.1325 - 6	7.70146 - 1
43200	43111	968.08	9.5528	7.94472	5.8927	3.74779	3.1325	7.70146
43400	43310	968.08	9.5528	7.94472	5.9494	3.78384	3.1325	7.70146
43600	43509	968.08	9.5528	7.94472	6.0066	3.82023	3.1325	7.70146
43800	43708	968.08	9.5528	7.94472	6.0644	3.85698	3.1325	7.70146
44000	43907	968.08	9.5528	7.94472	6.1227	3.89408	3.1325	7.70146
44200	44107	968.08	9.5528	7.94472	6.1816	3.93153	3.1325	7.70146
44400	44306	968.08	9.5528	7.94472	6.2410	3.96934	3.1325	7.70146
44600	44505	968.08	9.5528	7.94472	6.3010	4.00752	3.1325	7.70146
44800	44704	968.08	9.5528	7.94472	6.3616	4.04606	3.1325	7.70146
45000	44903	968.08	9.5528 - 6	7.94472 - 1	6.4228 - 4	4.08498 + 0	3.1325 - 6	7.70146 - 1
45200	45102	968.08	9.5528	7.94472	6.4846	4.12426	3.1325	7.70146
45400	45301	968.08	9.5528	7.94472	6.5470	4.16392	3.1325	7.70146
45600	45500	968.08	9.5528	7.94472	6.6099	4.20397	3.1325	7.70146
45800	45700	968.08	9.5528	7.94472	6.6735	4.24440	3.1325	7.70146
46000	45899	968.08	9.5528	7.94472	6.7377	4.28521	3.1325	7.70146
46200	46098	968.08	9.5528	7.94472	6.8025	4.32642	3.1325	7.70146
46400	46297	968.08	9.5528	7.94472	6.8679	4.36802	3.1325	7.70146
46600	46496	968.08	9.5528	7.94472	6.9339	4.41003	3.1325	7.70146
46800	46695	968.08	9.5528	7.94472	7.0006	4.45243	3.1325	7.70146
47000	46894	968.08	9.5528 - 6	7.94472 - 1	7.0679 - 4	4.49524 + 0	3.1325 - 6	7.70146 - 1
47200	47093	968.08	9.5528	7.94472	7.1359	4.53847	3.1325	7.70146
47400	47293	968.08	9.5528	7.94472	7.2045	4.58211	3.1325	7.70146
47600	47492	968.08	9.5528	7.94472	7.2737	4.62616	3.1325	7.70146
47800	47691	968.08	9.5528	7.94472	7.3437	4.67064	3.1325	7.70146
48000	47890	968.08	9.5528	7.94472	7.4143	4.71555	3.1325	7.70146
48200	48089	968.08	9.5528	7.94472	7.4856	4.76089	3.1325	7.70146
48400	48288	968.08	9.5528	7.94472	7.5575	4.80666	3.1325	7.70146
48600	48487	968.08	9.5528	7.94472	7.6302	4.85287	3.1325	7.70146
48800	48686	968.08	9.5528	7.94472	7.7036	4.89952	3.1325	7.70146
49000	48885	968.08	9.5528 - 6	7.94472 - 1	7.7776 - 4	4.94663 + 0	3.1325 - 6	7.70146 - 1
49200	49084	968.08	9.5528	7.94472	7.8524	4.99418	3.1325	7.70146
49400	49283	968.08	9.5528	7.94472	7.9279	5.04219	3.1325	7.70146
49600	49482	968.08	9.5528	7.94472	8.0041	5.09066	3.1325	7.70146
49800	49681	968.08	9.5528	7.94472	8.0810	5.13960	3.1325	7.70146
50000	49880	968.08	9.5528	7.94472	8.1587	5.18901	3.1325	7.70146
50200	50079	968.08	9.5528	7.94472	8.2371	5.23889	3.1325	7.70146
50400	50278	968.08	9.5528	7.94472	8.3163	5.28924	3.1325	7.70146
50600	50477	968.08	9.5528	7.94472	8.3962	5.34008	3.1325	7.70146
50800	50677	968.08	9.5528	7.94472	8.4770	5.39141	3.1325	7.70146
51000	50876	968.08	9.5528 - 6	7.94472 - 1	8.5584 - 4	5.44324 + 0	3.1325 - 6	7.70146 - 1
51200	51075	968.08	9.5528	7.94472	8.6407	5.49555	3.1325	7.70146
51400	51274	968.08	9.5528	7.94472	8.7237	5.54837	3.1325	7.70146
51600	51473	968.08	9.5528	7.94472	8.8076	5.60170	3.1325	7.70146
51800	51672	968.08	9.5528	7.94472	8.8922	5.65554	3.1325	7.70146
52000	51871	968.08	9.5528	7.94472	8.9777	5.70989	3.1325	7.70146
52200	52070	968.08	9.5528	7.94472	9.0640	5.76477	3.1325	7.70146
52400	52269	968.08	9.5528	7.94472	9.1511	5.82017	3.1325	7.70146
52600	52468	968.08	9.5528	7.94472	9.2390	5.87611	3.1325	7.70146
52800	52667	968.08	9.5528	7.94472	9.3278	5.93258	3.1325	7.70146
53000	52866	968.08	9.5528 - 6	7.94472 - 1	9.4175 - 4	5.98959 + 0	3.1325 - 6	7.70146 - 1
53200	53065	968.08	9.5528	7.94472	9.5080	6.04715	3.1325	7.70146
53400	53264	968.08	9.5528	7.94472	9.5993	6.10526	3.1325	7.70146
53600	53463	968.08	9.5528	7.94472	9.6916	6.16393	3.1325	7.70146
53800	53662	968.08	9.5528	7.94472	9.7847	6.22316	3.1325	7.70146
54000	53861	968.08	9.5528	7.94472	9.8787	6.28296	3.1325	7.70146
54200	54059	968.08	9.5528	7.94472	9.9737	6.34333	3.1325	7.70146
54400	54258	968.08	9.5528	7.94472	1.0069 - 3	6.40428	3.1325	7.70146
54600	54457	968.08	9.5528	7.94472	1.0166	6.46582	3.1325	7.70146
54800	54656	968.08	9.5528	7.94472	1.0264	6.52794	3.1325	7.70146
55000	54855	968.08	9.5528 - 6	7.94472 - 1	1.0363 - 3	6.59066 + 0	3.1325 - 6	7.70146 - 1
55200	55054	968.08	9.5528	7.94472	1.0462	6.65399	3.1325	7.70146
55400	55253	968.08	9.5528	7.94472	1.0563	6.71792	3.1325	7.70146
55600	55452	968.08	9.5528	7.94472	1.0664	6.78246	3.1325	7.70146
55800	55651	968.08	9.5528	7.94472	1.0767	6.84762	3.1325	7.70146
56000	55850	968.08	9.5528	7.94472	1.0870	6.91341	3.1325	7.70146
56200	56049	968.08	9.5528	7.94472	1.0974	6.97982	3.1325	7.70146
56400	56248	968.08	9.5528	7.94472	1.1080	7.04688	3.1325	7.70146
56600	56447	968.08	9.5528	7.94472	1.1186	7.11458	3.1325	7.70146
56800	56646	968.08	9.5528	7.94472	1.1294	7.18292	3.1325	7.70146
57000	56845	968.08	9.5528 - 6	7.94472 - 1	1.1402 - 3	7.25192 + 0	3.1325 - 6	7.70146 - 1
57200	57044	968.08	9.5528	7.94472	1.1512	7.32158	3.1325	7.70146
57400	57242	968.08	9.5528	7.94472	1.1622	7.39192	3.1325	7.70146
57600	57441	968.08	9.5528	7.94472	1.1734	7.46292	3.1325	7.70146
57800	57640	968.08	9.5528	7.94472	1.1847	7.53461	3.1325	7.70146
58000	57839	968.08	9.5528	7.94472	1.1960	7.60698	3.1325	7.70146
58200	58038	968.08	9.5528	7.94472	1.2075	7.68005	3.1325	7.70146
58400	58237	968.08	9.5528	7.94472	1.2191	7.75381	3.1325	7.70146
58600	58436	968.08	9.5528	7.94472	1.2308	7.82829	3.1325	7.70146
58800	58635	968.08	9.5528	7.94472	1.2427	7.90347	3.1325	7.70146

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
59000	59167	968.08	9.5528 - 6	7.94472 - 1	1.2647 - 3	8.04348 + 0	3.1325 - 6	7.70146 - 1
59200	59369	968.08	9.5528	7.94472	1.2769	8.12117	3.1325	7.70146
59400	59570	968.08	9.5528	7.94472	1.2892	8.19961	3.1325	7.70146
59600	59771	968.08	9.5528	7.94472	1.3017	8.27881	3.1325	7.70146
59800	59972	968.08	9.5528	7.94472	1.3143	8.35878	3.1325	7.70146
60000	60173	968.08	9.5528	7.94472	1.3270	8.43952	3.1325	7.70146
60200	60374	968.08	9.5528	7.94472	1.3398	8.52103	3.1325	7.70146
60400	60575	968.08	9.5528	7.94472	1.3527	8.60334	3.1325	7.70146
60600	60777	968.08	9.5528	7.94472	1.3658	8.68644	3.1325	7.70146
60800	60978	968.08	9.5528	7.94472	1.3790	8.77034	3.1325	7.70146
61000	61179	968.08	9.5528 - 6	7.94472 - 1	1.3923 - 3	8.85506 + 0	3.1325 - 6	7.70146 - 1
61200	61380	968.08	9.5528	7.94472	1.4057	8.94059	3.1325	7.70146
61400	61581	968.08	9.5528	7.94472	1.4193	9.02694	3.1325	7.70146
61600	61783	968.08	9.5528	7.94472	1.4330	9.11414	3.1325	7.70146
61800	61984	968.08	9.5528	7.94472	1.4469	9.20217	3.1325	7.70146
62000	62185	968.08	9.5528	7.94472	1.4608	9.29106	3.1325	7.70146
62200	62386	968.08	9.5528	7.94472	1.4749	9.38080	3.1325	7.70146
62400	62587	968.08	9.5528	7.94472	1.4892	9.47141	3.1325	7.70146
62600	62788	968.08	9.5528	7.94472	1.5036	9.56289	3.1325	7.70146
62800	62990	968.08	9.5528	7.94472	1.5181	9.65526	3.1325	7.70146
63000	63191	968.08	9.5528 - 6	7.94472 - 1	1.5328 - 3	9.74852 + 0	3.1325 - 6	7.70146 - 1
63200	63392	968.08	9.5528	7.94472	1.5476	9.84268	3.1325	7.70146
63400	63593	968.08	9.5528	7.94472	1.5625	9.93775	3.1325	7.70146
63600	63795	968.08	9.5528	7.94472	1.5776	1.00337 + 1	3.1325	7.70146
63800	63996	968.08	9.5528	7.94472	1.5928	1.01307	3.1325	7.70146
64000	64197	968.08	9.5528	7.94472	1.6082	1.02285	3.1325	7.70146
64200	64398	968.08	9.5528	7.94472	1.6238	1.03273	3.1325	7.70146
64400	64600	968.08	9.5528	7.94472	1.6395	1.04271	3.1325	7.70146
64600	64801	968.08	9.5528	7.94472	1.6553	1.05278	3.1325	7.70146
64800	65002	968.08	9.5528	7.94472	1.6713	1.06295	3.1325	7.70146
65000	65203	968.08	9.5528 - 6	7.94472 - 1	1.6874 - 3	1.07321 + 1	3.1325 - 6	7.70146 - 1
65200	65404	968.08	9.5528	7.94472	1.7037	1.08358	3.1325	7.70146
65400	65606	968.08	9.5528	7.94472	1.7202	1.09405	3.1325	7.70146
65600	65807	968.08	9.5528	7.94472	1.7368	1.10461	3.1325	7.70146
65800	66008	968.20	9.5549	7.94644	1.7544	1.11581	3.1333	7.70332
66000	66210	968.34	9.5571	7.94831	1.7722	1.12717	3.1341	7.70534
66200	66411	968.47	9.5594	7.95018	1.7903	1.13863	3.1349	7.70737
66400	66612	968.61	9.5616	7.95205	1.8085	1.15022	3.1358	7.70940
66600	66813	968.74	9.5639	7.95393	1.8269	1.16191	3.1366	7.71143
66800	67015	968.88	9.5661	7.95580	1.8455	1.17372	3.1374	7.71345
67000	67216	969.02	9.5684 - 6	7.95767 - 1	1.8642 - 3	1.18565 + 1	3.1382 - 6	7.71548 - 1
67200	67417	969.15	9.5706	7.95954	1.8831	1.19770	3.1391	7.71751
67400	67619	969.29	9.5729	7.96141	1.9023	1.20986	3.1399	7.71953
67600	67820	969.43	9.5751	7.96328	1.9216	1.22215	3.1407	7.72156
67800	68021	969.56	9.5774	7.96515	1.9411	1.23455	3.1415	7.72358
68000	68222	969.70	9.5796	7.96702	1.9608	1.24708	3.1424	7.72561
68200	68424	969.83	9.5819	7.96889	1.9807	1.25973	3.1432	7.72764
68400	68625	969.97	9.5841	7.97076	2.0008	1.27251	3.1440	7.72966
68600	68826	970.10	9.5863	7.97263	2.0211	1.28541	3.1448	7.73169
68800	69028	970.24	9.5886	7.97450	2.0415	1.29844	3.1456	7.73371
69000	69229	970.38	9.5908 - 6	7.97636 - 1	2.0622 - 3	1.31160 + 1	3.1465 - 6	7.73574 - 1
69200	69430	970.51	9.5931	7.97823	2.0831	1.32489	3.1473	7.73777
69400	69632	970.65	9.5953	7.98010	2.1042	1.33831	3.1481	7.73979
69600	69833	970.78	9.5976	7.98197	2.1255	1.35186	3.1489	7.74182
69800	70034	970.92	9.5998	7.98384	2.1471	1.36554	3.1498	7.74384
70000	70236	971.06	9.6021	7.98570	2.1688	1.37936	3.1506	7.74587
70200	70437	971.19	9.6043	7.98757	2.1907	1.39332	3.1514	7.74789
70400	70638	971.33	9.6066	7.98944	2.2129	1.40741	3.1522	7.74992
70600	70840	971.46	9.6088	7.99131	2.2352	1.42164	3.1531	7.75194
70800	71041	971.60	9.6111	7.99317	2.2578	1.43601	3.1539	7.75396
71000	71243	971.73	9.6133 - 6	7.99504 - 1	2.2807 - 3	1.45052 + 1	3.1547 - 6	7.75599 - 1
71200	71444	971.87	9.6155	7.99690	2.3037	1.46517	3.1555	7.75801
71400	71645	972.01	9.6178	7.99877	2.3270	1.47997	3.1564	7.76004
71600	71847	972.14	9.6200	8.00064	2.3505	1.49491	3.1572	7.76206
71800	72048	972.28	9.6223	8.00250	2.3742	1.51000	3.1580	7.76409
72000	72249	972.41	9.6245	8.00437	2.3981	1.52524	3.1588	7.76611
72200	72451	972.55	9.6268	8.00623	2.4223	1.54063	3.1596	7.76813
72400	72652	972.68	9.6290	8.00810	2.4468	1.55616	3.1605	7.77016
72600	72854	972.82	9.6312	8.00996	2.4714	1.57185	3.1613	7.77218
72800	73055	972.95	9.6335	8.01183	2.4963	1.58770	3.1621	7.77420
73000	73256	973.09	9.6357 - 6	8.01369 - 1	2.5215 - 3	1.60370 + 1	3.1629 - 6	7.77623 - 1
73200	73458	973.23	9.6380	8.01555	2.5469	1.61985	3.1638	7.77825
73400	73659	973.36	9.6402	8.01742	2.5726	1.63617	3.1646	7.78027
73600	73861	973.50	9.6424	8.01928	2.5985	1.65264	3.1654	7.78230
73800	74062	973.63	9.6447	8.02114	2.6246	1.66927	3.1662	7.78432
74000	74264	973.77	9.6469	8.02301	2.6510	1.68607	3.1671	7.78634
74200	74465	973.90	9.6492	8.02487	2.6777	1.70303	3.1679	7.78836
74400	74666	974.04	9.6514	8.02673	2.7046	1.72016	3.1687	7.79039
74600	74868	974.17	9.6536	8.02859	2.7318	1.73746	3.1695	7.79241
74800	75069	974.31	9.6559	8.03046	2.7593	1.75492	3.1703	7.79443

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
59000	58834	968.08	9.5528 - 6	7.94472 - 1	1.2546 - 3	7.97938 + 0	3.1325 - 6	7.70146 - 1
59200	59032	968.08	9.5528	7.94472	1.2667	8.05602	3.1325	7.70146
59400	59231	968.08	9.5528	7.94472	1.2788	8.13339	3.1325	7.70146
59600	59430	968.08	9.5528	7.94472	1.2911	8.21150	3.1325	7.70146
59800	59629	968.08	9.5528	7.94472	1.3035	8.29036	3.1325	7.70146
60000	59828	968.08	9.5528	7.94472	1.3160	8.36998	3.1325	7.70146
60200	60027	968.08	9.5528	7.94472	1.3287	8.45036	3.1325	7.70146
60400	60226	968.08	9.5528	7.94472	1.3414	8.53151	3.1325	7.70146
60600	60424	968.08	9.5528	7.94472	1.3543	8.61344	3.1325	7.70146
60800	60623	968.08	9.5528	7.94472	1.3673	8.69615	3.1325	7.70146
61000	60822	968.08	9.5528 - 6	7.94472 - 1	1.3804 - 3	8.77966 + 0	3.1325 - 6	7.70146 - 1
61200	61021	968.08	9.5528	7.94472	1.3937	8.86396	3.1325	7.70146
61400	61220	968.08	9.5528	7.94472	1.4071	8.94908	3.1325	7.70146
61600	61419	968.08	9.5528	7.94472	1.4206	9.03501	3.1325	7.70146
61800	61617	968.08	9.5528	7.94472	1.4342	9.12176	3.1325	7.70146
62000	61816	968.08	9.5528	7.94472	1.4480	9.20934	3.1325	7.70146
62200	62015	968.08	9.5528	7.94472	1.4619	9.29777	3.1325	7.70146
62400	62214	968.08	9.5528	7.94472	1.4759	9.38704	3.1325	7.70146
62600	62413	968.08	9.5528	7.94472	1.4901	9.47716	3.1325	7.70146
62800	62611	968.08	9.5528	7.94472	1.5044	9.56815	3.1325	7.70146
63000	62810	968.08	9.5528 - 6	7.94472 - 1	1.5188 - 3	9.66001 + 0	3.1325 - 6	7.70146 - 1
63200	63009	968.08	9.5528	7.94472	1.5334	9.75276	3.1325	7.70146
63400	63208	968.08	9.5528	7.94472	1.5482	9.84639	3.1325	7.70146
63600	63407	968.08	9.5528	7.94472	1.5630	9.94091	3.1325	7.70146
63800	63605	968.08	9.5528	7.94472	1.5780	1.00363 + 1	3.1325	7.70146
64000	63804	968.08	9.5528	7.94472	1.5932	1.01327	3.1325	7.70146
64200	64003	968.08	9.5528	7.94472	1.6085	1.02300	3.1325	7.70146
64400	64202	968.08	9.5528	7.94472	1.6239	1.03282	3.1325	7.70146
64600	64400	968.08	9.5528	7.94472	1.6395	1.04273	3.1325	7.70146
64800	64599	968.08	9.5528	7.94472	1.6552	1.05274	3.1325	7.70146
65000	64798	968.08	9.5528 - 6	7.94472 - 1	1.6711 - 3	1.06285 + 1	3.1325 - 6	7.70146 - 1
65200	64997	968.08	9.5528	7.94472	1.6872	1.07305	3.1325	7.70146
65400	65196	968.08	9.5528	7.94472	1.7034	1.08335	3.1325	7.70146
65600	65394	968.08	9.5528	7.94472	1.7197	1.09375	3.1325	7.70146
65800	65593	968.08	9.5528	7.94472	1.7362	1.10424	3.1325	7.70146
66000	65792	968.19	9.5548	7.94636	1.7537	1.11534	3.1333	7.70323
66200	65991	968.33	9.5570	7.94822	1.7714	1.12662	3.1341	7.70525
66400	66189	968.47	9.5592	7.95008	1.7893	1.13801	3.1349	7.70726
66600	66388	968.60	9.5615	7.95194	1.8074	1.14951	3.1357	7.70928
66800	66587	968.74	9.5637	7.95380	1.8257	1.16113	3.1365	7.71129
67000	66785	968.87	9.5659 - 6	7.95566 - 1	1.8441 - 3	1.17286 + 1	3.1373 - 6	7.71330 - 1
67200	66984	969.01	9.5682	7.95752	1.8627	1.18470	3.1382	7.71532
67400	67183	969.14	9.5704	7.95938	1.8815	1.19666	3.1390	7.71733
67600	67382	969.28	9.5727	7.96124	1.9005	1.20873	3.1398	7.71935
67800	67580	969.41	9.5749	7.96309	1.9197	1.22093	3.1406	7.72136
68000	67779	969.55	9.5771	7.96495	1.9390	1.23324	3.1414	7.72337
68200	67978	969.68	9.5794	7.96681	1.9586	1.24568	3.1423	7.72538
68400	68176	969.82	9.5816	7.96867	1.9783	1.25823	3.1431	7.72740
68600	68375	969.95	9.5838	7.97052	1.9983	1.27091	3.1439	7.72941
68800	68574	970.09	9.5861	7.97238	2.0184	1.28371	3.1447	7.73142
69000	68772	970.22	9.5883 - 6	7.97424 - 1	2.0387 - 3	1.29664 + 1	3.1455 - 6	7.73344 - 1
69200	68971	970.36	9.5905	7.97609	2.0592	1.30969	3.1464	7.73545
69400	69170	970.49	9.5927	7.97795	2.0800	1.32287	3.1472	7.73746
69600	69368	970.63	9.5950	7.97981	2.1009	1.33618	3.1480	7.73947
69800	69567	970.76	9.5972	7.98166	2.1220	1.34962	3.1488	7.74148
70000	69766	970.90	9.5994	7.98352	2.1434	1.36319	3.1496	7.74349
70200	69964	971.03	9.6017	7.98537	2.1649	1.37690	3.1504	7.74551
70400	70163	971.17	9.6039	7.98723	2.1867	1.39073	3.1513	7.74752
70600	70362	971.30	9.6061	7.98908	2.2086	1.40470	3.1521	7.74953
70800	70560	971.44	9.6084	7.99094	2.2308	1.41881	3.1529	7.75154
71000	70759	971.57	9.6106 - 6	7.99279 - 1	2.2532 - 3	1.43306 + 1	3.1537 - 6	7.75355 - 1
71200	70958	971.71	9.6128	7.99464	2.2758	1.44744	3.1545	7.75556
71400	71156	971.84	9.6151	7.99650	2.2987	1.46196	3.1554	7.75757
71600	71355	971.98	9.6173	7.99835	2.3217	1.47663	3.1562	7.75958
71800	71554	972.11	9.6195	8.00020	2.3450	1.49144	3.1570	7.76159
72000	71752	972.24	9.6217	8.00206	2.3685	1.50639	3.1578	7.76360
72200	71951	972.38	9.6240	8.00391	2.3922	1.52148	3.1586	7.76561
72400	72150	972.51	9.6262	8.00576	2.4162	1.53673	3.1594	7.76762
72600	72348	972.65	9.6284	8.00761	2.4404	1.55212	3.1603	7.76963
72800	72547	972.78	9.6306	8.00946	2.4648	1.56766	3.1611	7.77164
73000	72745	972.92	9.6329 - 6	8.01132 - 1	2.4895 - 3	1.58335 + 1	3.1619 - 6	7.77365 - 1
73200	72944	973.05	9.6351	8.01317	2.5144	1.59920	3.1627	7.77566
73400	73143	973.19	9.6373	8.01502	2.5396	1.61519	3.1635	7.77767
73600	73341	973.32	9.6395	8.01687	2.5650	1.63135	3.1643	7.77968
73800	73540	973.46	9.6418	8.01872	2.5906	1.64766	3.1652	7.78169
74000	73738	973.59	9.6440	8.02057	2.6165	1.66413	3.1660	7.78370
74200	73937	973.72	9.6462	8.02242	2.6427	1.68076	3.1668	7.78570
74400	74135	973.86	9.6484	8.02427	2.6691	1.69754	3.1676	7.78771
74600	74334	973.99	9.6507	8.02612	2.6957	1.71450	3.1684	7.78972
74800	74533	974.13	9.6529	8.02797	2.7226	1.73161	3.1692	7.79173



TABLE VII.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
75000	75271	974.44	9.6581 - 6	8.03232 - 1	2.7870 - 3	1.77255 + 1	3.1742 - 6	7.79645 - 1
75200	75472	974.58	9.6604	8.03418	2.8150	1.79036	3.1720	7.79848
75400	75674	974.72	9.6626	8.03604	2.8433	1.80834	3.1728	7.80050
75600	75875	974.85	9.6648	8.03790	2.8718	1.82650	3.1736	7.80252
75800	76077	974.99	9.6671	8.03976	2.9006	1.84483	3.1745	7.80454
76000	76278	975.12	9.6693	8.04162	2.9297	1.86334	3.1753	7.80656
76200	76479	975.26	9.6715	8.04349	2.9591	1.88203	3.1761	7.80858
76400	76681	975.39	9.6738	8.04535	2.9888	1.90091	3.1769	7.81061
76600	76882	975.53	9.6760	8.04721	3.0188	1.91997	3.1777	7.81263
76800	77084	975.66	9.6783	8.04907	3.0490	1.93921	3.1786	7.81465
77000	77285	975.80	9.6805 - 6	8.05093 - 1	3.0796 - 3	1.95864 + 1	3.1794 - 6	7.81667 - 1
77200	77487	975.93	9.6827	8.05278	3.1104	1.97826	3.1802	7.81869
77400	77688	976.07	9.6850	8.05464	3.1416	1.99808	3.1810	7.82071
77600	77890	976.20	9.6872	8.05650	3.1730	2.01808	3.1819	7.82273
77800	78091	976.34	9.6894	8.05836	3.2048	2.03828	3.1827	7.82475
78000	78293	976.47	9.6917	8.06022	3.2369	2.05867	3.1835	7.82677
78200	78494	976.61	9.6939	8.06208	3.2692	2.07927	3.1843	7.82879
78400	78696	976.74	9.6961	8.06394	3.3019	2.10006	3.1851	7.83081
78600	78897	976.88	9.6984	8.06579	3.3350	2.12106	3.1860	7.83283
78800	79099	977.01	9.7006	8.06765	3.3683	2.14226	3.1868	7.83485
79000	79300	977.15	9.7028 - 6	8.06951 - 1	3.4019 - 3	2.16366 + 1	3.1876 - 6	7.83687 - 1
79200	79502	977.28	9.7051	8.07137	3.4359	2.18528	3.1884	7.83889
79400	79703	977.42	9.7073	8.07322	3.4702	2.20710	3.1893	7.84091
79600	79905	977.55	9.7095	8.07508	3.5049	2.22914	3.1901	7.84293
79800	80107	977.69	9.7118	8.07694	3.5399	2.25139	3.1909	7.84495
80000	80308	977.82	9.7140	8.07879	3.5752	2.27385	3.1917	7.84697
80200	80510	977.96	9.7162	8.08065	3.6109	2.29654	3.1925	7.84899
80400	80711	978.09	9.7185	8.08251	3.6469	2.31944	3.1934	7.85101
80600	80913	978.23	9.7207	8.08436	3.6832	2.34256	3.1942	7.85303
80800	81114	978.36	9.7229	8.08622	3.7199	2.36591	3.1950	7.85505
81000	81316	978.50	9.7252 - 6	8.08807 - 1	3.7570 - 3	2.38949 + 1	3.1958 - 6	7.85706 - 1
81200	81517	978.63	9.7274	8.08993	3.7944	2.41329	3.1966	7.85908
81400	81719	978.76	9.7296	8.09178	3.8322	2.43733	3.1975	7.86110
81600	81921	978.90	9.7319	8.09364	3.8704	2.46159	3.1983	7.86312
81800	82122	979.03	9.7341	8.09549	3.9089	2.48610	3.1991	7.86514
82000	82324	979.17	9.7363	8.09734	3.9478	2.51083	3.1999	7.86716
82200	82525	979.30	9.7385	8.09920	3.9871	2.53581	3.2007	7.86917
82400	82727	979.44	9.7408	8.10105	4.0267	2.56103	3.2016	7.87119
82600	82928	979.57	9.7430	8.10291	4.0668	2.58649	3.2024	7.87321
82800	83130	979.71	9.7452	8.10476	4.1072	2.61220	3.2032	7.87523
83000	83332	979.84	9.7475 - 6	8.10661 - 1	4.1480 - 3	2.63816 + 1	3.2040 - 6	7.87724 - 1
83200	83533	979.98	9.7497	8.10846	4.1892	2.66437	3.2048	7.87926
83400	83735	980.11	9.7519	8.11032	4.2308	2.69083	3.2057	7.88128
83600	83937	980.25	9.7541	8.11217	4.2728	2.71754	3.2065	7.88330
83800	84138	980.38	9.7564	8.11402	4.3152	2.74452	3.2073	7.88531
84000	84340	980.51	9.7586	8.11587	4.3580	2.77175	3.2081	7.88733
84200	84541	980.65	9.7608	8.11773	4.4013	2.79925	3.2090	7.88935
84400	84743	980.78	9.7630	8.11958	4.4449	2.82701	3.2098	7.89136
84600	84945	980.92	9.7653	8.12143	4.4890	2.85504	3.2106	7.89338
84800	85146	981.05	9.7675	8.12328	4.5335	2.88334	3.2114	7.89540
85000	85348	981.19	9.7697 - 6	8.12513 - 1	4.5784 - 3	2.91191 + 1	3.2122 - 6	7.89741 - 1
85200	85550	981.32	9.7719	8.12698	4.6238	2.94076	3.2131	7.89943
85400	85751	981.46	9.7742	8.12883	4.6696	2.96988	3.2139	7.90145
85600	85953	981.59	9.7764	8.13068	4.7158	2.99929	3.2147	7.90346
85800	86154	981.72	9.7786	8.13253	4.7625	3.02897	3.2155	7.90548
86000	86356	981.86	9.7808	8.13438	4.8096	3.05895	3.2163	7.90749
86200	86558	981.99	9.7831	8.13623	4.8572	3.08921	3.2172	7.90951
86400	86759	982.13	9.7853	8.13808	4.9052	3.11976	3.2180	7.91153
86600	86961	982.26	9.7875	8.13993	4.9537	3.15061	3.2188	7.91354
86800	87163	982.40	9.7897	8.14178	5.0027	3.18175	3.2196	7.91556
87000	87364	982.53	9.7920 - 6	8.14363 - 1	5.0521 - 3	3.21319 + 1	3.2204 - 6	7.91757 - 1
87200	87566	982.66	9.7942	8.14547	5.1020	3.24494	3.2213	7.91959
87400	87768	982.80	9.7964	8.14732	5.1524	3.27699	3.2221	7.92160
87600	87970	982.93	9.7986	8.14917	5.2033	3.30934	3.2229	7.92362
87800	88171	983.07	9.8008	8.15102	5.2547	3.34201	3.2237	7.92563
88000	88373	983.20	9.8031	8.15287	5.3065	3.37499	3.2245	7.92765
88200	88575	983.33	9.8053	8.15471	5.3589	3.40829	3.2253	7.92966
88400	88776	983.47	9.8075	8.15656	5.4117	3.44190	3.2262	7.93168
88600	88978	983.60	9.8097	8.15841	5.4651	3.47584	3.2270	7.93369
88800	89180	983.74	9.8120	8.16025	5.5190	3.51010	3.2278	7.93570
89000	89381	983.87	9.8142 - 6	8.16210 - 1	5.5733 - 3	3.54469 + 1	3.2286 - 6	7.93772 - 1
89200	89583	984.00	9.8164	8.16395	5.6283	3.57962	3.2294	7.93973
89400	89785	984.14	9.8186	8.16579	5.6837	3.61487	3.2303	7.94175
89600	89987	984.27	9.8208	8.16764	5.7397	3.65047	3.2311	7.94376
89800	90188	984.41	9.8230	8.16948	5.7962	3.68640	3.2319	7.94577
90000	90390	984.54	9.8253	8.17133	5.8532	3.72268	3.2327	7.94779
90200	90592	984.67	9.8275	8.17317	5.9108	3.75931	3.2335	7.94980
90400	90794	984.81	9.8297	8.17502	5.9689	3.79628	3.2344	7.95181
90600	90995	984.94	9.8319	8.17686	6.0276	3.83361	3.2352	7.95383
90800	91197	985.08	9.8341	8.17871	6.0869	3.87130	3.2360	7.95584

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

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Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
75000	74731	974.26	9.6551 - 6	8.02982 - 1	2.7498 - 3	1.74889 + 1	3.1701 - 6	7.79374 - 1
75200	74930	974.40	9.6573	8.03166	2.7772	1.76634	3.1709	7.79574
75400	75128	974.53	9.6596	8.03351	2.8049	1.78396	3.1717	7.79775
75600	75327	974.67	9.6618	8.03536	2.8329	1.80175	3.1725	7.79976
75800	75525	974.80	9.6640	8.03721	2.8611	1.81971	3.1733	7.80177
76000	75724	974.93	9.6662	8.03906	2.8897	1.83784	3.1741	7.80377
76200	75923	975.07	9.6684	8.04090	2.9184	1.85615	3.1750	7.80578
76400	76121	975.20	9.6707	8.04275	2.9475	1.87464	3.1758	7.80779
76600	76320	975.34	9.6729	8.04460	2.9769	1.89330	3.1766	7.80979
76800	76518	975.47	9.6751	8.04644	3.0065	1.91215	3.1774	7.81180
77000	76717	975.61	9.6773 - 6	8.04829 - 1	3.0364 - 3	1.93117 + 1	3.1782 - 6	7.81381 - 1
77200	76915	975.74	9.6795	8.05014	3.0666	1.95038	3.1790	7.81581
77400	77114	975.87	9.6818	8.05198	3.0971	1.96978	3.1799	7.81782
77600	77312	976.01	9.6840	8.05383	3.1279	1.98936	3.1807	7.81982
77800	77511	976.14	9.6862	8.05567	3.1590	2.00913	3.1815	7.82183
78000	77709	976.28	9.6884	8.05752	3.1904	2.02910	3.1823	7.82384
78200	77908	976.41	9.6906	8.05936	3.2220	2.04925	3.1831	7.82584
78400	78106	976.54	9.6929	8.06121	3.2540	2.06960	3.1839	7.82785
78600	78305	976.68	9.6951	8.06305	3.2863	2.09014	3.1848	7.82985
78800	78503	976.81	9.6973	8.06490	3.3190	2.11089	3.1856	7.83186
79000	78702	976.95	9.6995 - 6	8.06674 - 1	3.3519 - 3	2.13183 + 1	3.1864 - 6	7.83386 - 1
79200	78900	977.08	9.7017	8.06858	3.3851	2.15297	3.1872	7.83587
79400	79099	977.21	9.7039	8.07043	3.4187	2.17432	3.1880	7.83787
79600	79297	977.35	9.7062	8.07227	3.4526	2.19587	3.1888	7.83987
79800	79496	977.48	9.7084	8.07411	3.4868	2.21763	3.1896	7.84188
80000	79694	977.62	9.7106	8.07596	3.5213	2.23960	3.1905	7.84388
80200	79893	977.75	9.7128	8.07780	3.5562	2.26178	3.1913	7.84589
80400	80091	977.88	9.7150	8.07964	3.5914	2.28417	3.1921	7.84789
80600	80290	978.02	9.7172	8.08148	3.6270	2.30678	3.1929	7.84989
80800	80488	978.15	9.7195	8.08332	3.6628	2.32960	3.1937	7.85190
81000	80687	978.28	9.7217 - 6	8.08516 - 1	3.6991 - 3	2.35265 + 1	3.1945 - 6	7.85390 - 1
81200	80885	978.42	9.7239	8.08701	3.7357	2.37591	3.1953	7.85590
81400	81083	978.55	9.7261	8.08885	3.7726	2.39940	3.1962	7.85791
81600	81282	978.69	9.7283	8.09069	3.8099	2.42311	3.1970	7.85991
81800	81480	978.82	9.7305	8.09253	3.8475	2.44705	3.1978	7.86191
82000	81679	978.95	9.7327	8.09437	3.8855	2.47122	3.1986	7.86392
82200	81877	979.09	9.7349	8.09621	3.9239	2.49562	3.1994	7.86592
82400	82076	979.22	9.7372	8.09805	3.9626	2.52026	3.2002	7.86792
82600	82274	979.35	9.7394	8.09989	4.0017	2.54513	3.2011	7.86992
82800	82473	979.49	9.7416	8.10172	4.0412	2.57024	3.2019	7.87192
83000	82671	979.62	9.7438 - 6	8.10356 - 1	4.0811 - 3	2.59558 + 1	3.2027 - 6	7.87393 - 1
83200	82869	979.75	9.7460	8.10540	4.1213	2.62117	3.2035	7.87593
83400	83068	979.89	9.7482	8.10724	4.1619	2.64701	3.2043	7.87793
83600	83266	980.02	9.7504	8.10908	4.2029	2.67309	3.2051	7.87993
83800	83465	980.15	9.7526	8.11092	4.2443	2.69943	3.2059	7.88193
84000	83663	980.29	9.7548	8.11275	4.2861	2.72601	3.2067	7.88393
84200	83861	980.42	9.7570	8.11459	4.3283	2.75285	3.2076	7.88593
84400	84060	980.55	9.7593	8.11643	4.3709	2.77994	3.2084	7.88793
84600	84258	980.69	9.7615	8.11826	4.4139	2.80729	3.2092	7.88993
84800	84457	980.82	9.7637	8.12010	4.4573	2.83491	3.2100	7.89193
85000	84655	980.95	9.7659 - 6	8.12194 - 1	4.5012 - 3	2.86278 + 1	3.2108 - 6	7.89394 - 1
85200	84853	981.09	9.7681	8.12377	4.5454	2.89093	3.2116	7.89594
85400	85052	981.22	9.7703	8.12561	4.5901	2.91934	3.2124	7.89794
85600	85250	981.35	9.7725	8.12744	4.6352	2.94802	3.2133	7.89994
85800	85448	981.49	9.7747	8.12928	4.6807	2.97697	3.2141	7.90194
86000	85647	981.62	9.7769	8.13111	4.7267	3.00620	3.2149	7.90394
86200	85845	981.75	9.7791	8.13295	4.7731	3.03571	3.2157	7.90594
86400	86043	981.89	9.7813	8.13478	4.8199	3.06550	3.2165	7.90794
86600	86242	982.02	9.7835	8.13662	4.8672	3.09558	3.2173	7.90994
86800	86440	982.15	9.7857	8.13845	4.9149	3.12594	3.2181	7.91193
87000	86639	982.29	9.7879 - 6	8.14028 - 1	4.9631 - 3	3.15659 + 1	3.2189 - 6	7.91393 - 1
87200	86837	982.42	9.7901	8.14212	5.0118	3.18753	3.2198	7.91593
87400	87035	982.55	9.7924	8.14395	5.0609	3.21876	3.2206	7.91793
87600	87234	982.69	9.7946	8.14578	5.1105	3.25029	3.2214	7.91992
87800	87432	982.82	9.7968	8.14762	5.1605	3.28212	3.2222	7.92192
88000	87630	982.95	9.7990	8.14945	5.2110	3.31426	3.2230	7.92392
88200	87829	983.09	9.8012	8.15128	5.2620	3.34669	3.2238	7.92592
88400	88027	983.22	9.8034	8.15311	5.3135	3.37944	3.2246	7.92792
88600	88225	983.35	9.8056	8.15494	5.3655	3.41250	3.2255	7.92991
88800	88423	983.48	9.8078	8.15678	5.4180	3.44586	3.2263	7.93191
89000	88622	983.62	9.8100 - 6	8.15861 - 1	5.4709 - 3	3.47955 + 1	3.2271 - 6	7.93391 - 1
89200	88820	983.75	9.8122	8.16044	5.5244	3.51356	3.2279	7.93591
89400	89018	983.88	9.8144	8.16227	5.5784	3.54789	3.2287	7.93790
89600	89217	984.02	9.8166	8.16410	5.6328	3.58254	3.2295	7.93990
89800	89415	984.15	9.8188	8.16593	5.6878	3.61752	3.2303	7.94190
90000	89613	984.28	9.8210	8.16776	5.7434	3.65283	3.2311	7.94389
90200	89812	984.41	9.8232	8.16959	5.7994	3.68848	3.2319	7.94589
90400	90010	984.55	9.8254	8.17142	5.8560	3.72446	3.2328	7.94789
90600	90208	984.68	9.8276	8.17325	5.9131	3.76079	3.2336	7.94988
90800	90406	984.81	9.8298	8.17508	5.9708	3.79746	3.2344	7.95188

TABLE VI.—Continued  
 GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
91000	91399	985.21	9.8364 - 6	8.18055 - 1	6.1467 - 3	3.90934 + 1	3.2368 - 6	7.95785 - 1
91200	91601	985.34	9.8386	8.18240	6.2071	3.94775	3.2376	7.95987
91400	91802	985.48	9.8408	8.18424	6.2680	3.98653	3.2385	7.96188
91600	92004	985.61	9.8430	8.18608	6.3296	4.02567	3.2393	7.96389
91800	92206	985.74	9.8452	8.18793	6.3917	4.06519	3.2401	7.96590
92000	92408	985.88	9.8474	8.18977	6.4545	4.10509	3.2409	7.96792
92200	92609	986.01	9.8497	8.19161	6.5178	4.14536	3.2417	7.96993
92400	92811	986.15	9.8519	8.19345	6.5817	4.18603	3.2425	7.97194
92600	93013	986.28	9.8541	8.19530	6.6463	4.22708	3.2434	7.97395
92800	93215	986.41	9.8563	8.19714	6.7114	4.26852	3.2442	7.97596
93000	93417	986.55	9.8585 - 6	8.19898 - 1	6.7772 - 3	4.31035 + 1	3.2450 - 6	7.97798 - 1
93200	93618	986.68	9.8607	8.20082	6.8436	4.35258	3.2458	7.97999
93400	93820	986.81	9.8629	8.20266	6.9106	4.39522	3.2466	7.98200
93600	94022	986.95	9.8652	8.20451	6.9783	4.43826	3.2475	7.98401
93800	94224	987.08	9.8674	8.20635	7.0466	4.48171	3.2483	7.98602
94000	94426	987.21	9.8696	8.20819	7.1156	4.52557	3.2491	7.98803
94200	94627	987.35	9.8718	8.21003	7.1852	4.56985	3.2499	7.99004
94400	94829	987.48	9.8740	8.21187	7.2555	4.61456	3.2507	7.99206
94600	95031	987.62	9.8762	8.21371	7.3264	4.65968	3.2515	7.99407
94800	95233	987.75	9.8784	8.21555	7.3981	4.70524	3.2524	7.99608
95000	95435	987.88	9.8807 - 6	8.21739 - 1	7.4704 - 3	4.75123 + 1	3.2532 - 6	7.99809 - 1
95200	95637	988.02	9.8829	8.21923	7.5434	4.79765	3.2540	8.00010
95400	95838	988.15	9.8851	8.22107	7.6171	4.84452	3.2548	8.00211
95600	96040	988.28	9.8873	8.22291	7.6915	4.89183	3.2556	8.00412
95800	96242	988.42	9.8895	8.22475	7.7665	4.93959	3.2565	8.00613
96000	96444	988.55	9.8917	8.22659	7.8424	4.98781	3.2573	8.00814
96200	96646	988.68	9.8939	8.22842	7.9189	5.03648	3.2581	8.01015
96400	96848	988.82	9.8961	8.23026	7.9961	5.08561	3.2589	8.01216
96600	97050	988.95	9.8983	8.23210	8.0741	5.13521	3.2597	8.01417
96800	97251	989.08	9.9006	8.23394	8.1528	5.18527	3.2605	8.01618
97000	97453	989.22	9.9028 - 6	8.23578 - 1	8.2323 - 3	5.23582 + 1	3.2614 - 6	8.01819 - 1
97200	97655	989.35	9.9050	8.23761	8.3125	5.28684	3.2622	8.02020
97400	97857	989.48	9.9072	8.23945	8.3935	5.33834	3.2630	8.02221
97600	98059	989.62	9.9094	8.24129	8.4753	5.39034	3.2638	8.02422
97800	98261	989.75	9.9116	8.24312	8.5578	5.44282	3.2646	8.02622
98000	98463	989.88	9.9138	8.24496	8.6411	5.49580	3.2654	8.02823
98200	98665	990.02	9.9160	8.24680	8.7252	5.54928	3.2662	8.03024
98400	98867	990.15	9.9182	8.24863	8.8101	5.60327	3.2671	8.03225
98600	99068	990.28	9.9204	8.25047	8.8957	5.65777	3.2679	8.03426
98800	99270	990.42	9.9226	8.25231	8.9822	5.71278	3.2687	8.03627
99000	99472	990.55	9.9248 - 6	8.25414 - 1	9.0696 - 3	5.76832 + 1	3.2695 - 6	8.03828 - 1
99200	99674	990.68	9.9270	8.25598	9.1577	5.82437	3.2703	8.04028
99400	99876	990.81	9.9293	8.25782	9.2467	5.88096	3.2711	8.04229
99600	100078	990.95	9.9315	8.25965	9.3365	5.93808	3.2720	8.04430
99800	100280	991.08	9.9337	8.26148	9.4271	5.99574	3.2728	8.04631
100000	100482	991.21	9.9359	8.26331	9.5187	6.05395	3.2736	8.04832
100200	100684	991.35	9.9381	8.26515	9.6110	6.11270	3.2744	8.05032
100400	100886	991.48	9.9403	8.26698	9.7043	6.17200	3.2752	8.05233
100600	101088	991.61	9.9425	8.26882	9.7984	6.23187	3.2761	8.05434
100800	101290	991.75	9.9447	8.27065	9.8934	6.29230	3.2769	8.05635
101000	101492	991.88	9.9469 - 6	8.27248 - 1	9.9893 - 3	6.35331 + 1	3.2777 - 6	8.05835 - 1
101200	101694	992.01	9.9491	8.27432	1.0086 - 2	6.41488	3.2785	8.06036
101400	101895	992.14	9.9513	8.27615	1.0184	6.47704	3.2793	8.06237
101600	102097	992.28	9.9535	8.27798	1.0283	6.53978	3.2801	8.06437
101800	102299	992.41	9.9557	8.27981	1.0382	6.60311	3.2810	8.06638
102000	102501	992.54	9.9579	8.28165	1.0483	6.66704	3.2818	8.06839
102200	102703	992.68	9.9601	8.28348	1.0584	6.73157	3.2826	8.07039
102400	102905	992.81	9.9623	8.28531	1.0686	6.79670	3.2834	8.07240
102600	103107	992.94	9.9645	8.28714	1.0790	6.86245	3.2842	8.07441
102800	103309	993.07	9.9667	8.28897	1.0894	6.92881	3.2850	8.07641
103000	103511	993.21	9.9689 - 6	8.29081 - 1	1.1000 - 2	6.99580 + 1	3.2859 - 6	8.07842 - 1
103200	103713	993.34	9.9711	8.29264	1.1106	7.06343	3.2867	8.08043
103400	103915	993.47	9.9733	8.29447	1.1213	7.13168	3.2875	8.08243
103600	104117	993.60	9.9755	8.29630	1.1322	7.20057	3.2883	8.08444
103800	104319	993.74	9.9777	8.29813	1.1431	7.27012	3.2891	8.08644
104000	104521	993.87	9.9799	8.29996	1.1541	7.34031	3.2899	8.08845
104200	104723	994.00	9.9821	8.30179	1.1653	7.41116	3.2907	8.09045
104400	104925	994.14	9.9843	8.30362	1.1765	7.48269	3.2916	8.09246
104600	105127	994.27	9.9865	8.30545	1.1879	7.55487	3.2924	8.09446
104800	105329	994.40	9.9887	8.30728	1.1993	7.62774	3.2932	8.09647
105000	105531	994.55	9.9912 - 6	8.30912 - 1	1.2109 - 2	7.70173 + 1	3.2941 - 6	8.09847 - 1
105200	105733	994.68	1.0007 - 5	8.32212	1.2430	7.90580	3.2998	8.11274
105400	105935	994.81	1.0022	8.33490	1.2759	8.11487	3.3055	8.12677
105600	106137	994.95	1.0037	8.34768	1.3096	8.32906	3.3112	8.14079
105800	106339	995.08	1.0053	8.36045	1.3441	8.54849	3.3169	8.15480
106000	106541	995.21	1.0068	8.37320	1.3794	8.77327	3.3226	8.16881
106200	106743	995.34	1.0083	8.38595	1.4156	9.00352	3.3283	8.18281
106400	106945	995.47	1.0099	8.39868	1.4527	9.23937	3.3340	8.19681
106600	107147	995.60	1.0114	8.41140	1.4907	9.48094	3.3397	8.21080
106800	107349	995.73	1.0129	8.42412	1.5296	9.72835	3.3454	8.22478

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
91000	90605	984.94	9.8320 - 6	8.17691 - 1	6.0290 - 3	3.83447 + 1	3.2352 - 6	7.95387 - 1
91200	90803	985.08	9.8342	8.17873	6.0877	3.87184	3.2360	7.95587
91400	91001	985.21	9.8364	8.18056	6.1470	3.90956	3.2368	7.95786
91600	91199	985.34	9.8386	8.18239	6.2069	3.94763	3.2376	7.95986
91800	91398	985.48	9.8408	8.18422	6.2673	3.98607	3.2384	7.96185
92000	91596	985.61	9.8430	8.18604	6.3283	4.02486	3.2393	7.96385
92200	91794	985.74	9.8452	8.18787	6.3899	4.06403	3.2401	7.96584
92400	91992	985.87	9.8474	8.18970	6.4521	4.10356	3.2409	7.96784
92600	92191	986.01	9.8496	8.19153	6.5148	4.14347	3.2417	7.96983
92800	92389	986.14	9.8518	8.19335	6.5781	4.18375	3.2425	7.97183
93000	92587	986.27	9.8539 - 6	8.19518 - 1	6.6421 - 3	4.22441 + 1	3.2433 - 6	7.97382 - 1
93200	92785	986.40	9.8561	8.19700	6.7066	4.26546	3.2441	7.97582
93400	92984	986.54	9.8583	8.19883	6.7717	4.30689	3.2449	7.97781
93600	93182	986.67	9.8605	8.20065	6.8375	4.34871	3.2457	7.97980
93800	93380	986.80	9.8627	8.20248	6.9039	4.39093	3.2466	7.98180
94000	93578	986.93	9.8649	8.20430	6.9709	4.43354	3.2474	7.98379
94200	93776	987.07	9.8671	8.20613	7.0385	4.47656	3.2482	7.98578
94400	93975	987.20	9.8693	8.20795	7.1068	4.51998	3.2490	7.98778
94600	94173	987.33	9.8715	8.20978	7.1757	4.56380	3.2498	7.98977
94800	94371	987.46	9.8737	8.21160	7.2453	4.60804	3.2506	7.99176
95000	94569	987.59	9.8759 - 6	8.21343 - 1	7.3155 - 3	4.65270 + 1	3.2514 - 6	7.99376 - 1
95200	94767	987.73	9.8781	8.21525	7.3863	4.69778	3.2522	7.99575
95400	94966	987.86	9.8803	8.21707	7.4579	4.74327	3.2530	7.99774
95600	95164	987.99	9.8825	8.21890	7.5301	4.78920	3.2539	7.99973
95800	95362	988.12	9.8847	8.22072	7.6030	4.83556	3.2547	8.00173
96000	95560	988.26	9.8868	8.22254	7.6765	4.88235	3.2555	8.00372
96200	95758	988.39	9.8890	8.22436	7.7508	4.92958	3.2563	8.00571
96400	95956	988.52	9.8912	8.22618	7.8258	4.97726	3.2571	8.00770
96600	96155	988.65	9.8934	8.22801	7.9014	5.02538	3.2579	8.00969
96800	96353	988.78	9.8956	8.22983	7.9778	5.07396	3.2587	8.01168
97000	96551	988.92	9.8978 - 6	8.23165 - 1	8.0549 - 3	5.12298 + 1	3.2595 - 6	8.01367 - 1
97200	96749	989.05	9.9000	8.23347	8.1327	5.17247	3.2603	8.01567
97400	96947	989.18	9.9022	8.23529	8.2112	5.22242	3.2611	8.01766
97600	97145	989.31	9.9044	8.23711	8.2905	5.27284	3.2620	8.01965
97800	97343	989.45	9.9066	8.23893	8.3705	5.32374	3.2628	8.02164
98000	97542	989.58	9.9087	8.24075	8.4513	5.37510	3.2636	8.02363
98200	97740	989.71	9.9109	8.24257	8.5328	5.42695	3.2644	8.02562
98400	97938	989.84	9.9131	8.24439	8.6151	5.47928	3.2652	8.02761
98600	98136	989.97	9.9153	8.24621	8.6982	5.53211	3.2660	8.02960
98800	98334	990.10	9.9175	8.24803	8.7820	5.58543	3.2668	8.03159
99000	98532	990.24	9.9197 - 6	8.24985 - 1	8.8666 - 3	5.63924 + 1	3.2676 - 6	8.03358 - 1
99200	98730	990.37	9.9219	8.25167	8.9520	5.69356	3.2684	8.03557
99400	98928	990.50	9.9241	8.25348	9.0382	5.74838	3.2692	8.03756
99600	99127	990.63	9.9262	8.25530	9.1252	5.80372	3.2700	8.03955
99800	99325	990.76	9.9284	8.25712	9.2130	5.85957	3.2709	8.04154
100000	99523	990.90	9.9306	8.25894	9.3017	5.91595	3.2717	8.04352
100200	99721	991.03	9.9328	8.26075	9.3912	5.97285	3.2725	8.04551
100400	99919	991.16	9.9350	8.26257	9.4815	6.03028	3.2733	8.04750
100600	100117	991.29	9.9372	8.26439	9.5726	6.08825	3.2741	8.04949
100800	100315	991.42	9.9393	8.26620	9.6646	6.14676	3.2749	8.05148
101000	100513	991.55	9.9415 - 6	8.26802 - 1	9.7574 - 3	6.20581 + 1	3.2757 - 6	8.05347 - 1
101200	100711	991.69	9.9437	8.26984	9.8512	6.26542	3.2765	8.05546
101400	100909	991.82	9.9459	8.27165	9.9457	6.32557	3.2773	8.05744
101600	101107	991.95	9.9481	8.27347	1.0041 - 2	6.38629	3.2781	8.05943
101800	101305	992.08	9.9503	8.27528	1.0138	6.44758	3.2789	8.06142
102000	101504	992.21	9.9524	8.27710	1.0235	6.50943	3.2797	8.06341
102200	101702	992.34	9.9546	8.27891	1.0333	6.57186	3.2806	8.06539
102400	101900	992.48	9.9568	8.28073	1.0432	6.63487	3.2814	8.06738
102600	102098	992.61	9.9590	8.28254	1.0532	6.69847	3.2822	8.06937
102800	102296	992.74	9.9612	8.28436	1.0633	6.76266	3.2830	8.07135
103000	102494	992.87	9.9634 - 6	8.28617 - 1	1.0735 - 2	6.82744 + 1	3.2838 - 6	8.07334 - 1
103200	102692	993.00	9.9655	8.28798	1.0838	6.89282	3.2846	8.07533
103400	102890	993.13	9.9677	8.28980	1.0941	6.95882	3.2854	8.07731
103600	103088	993.26	9.9699	8.29161	1.1046	7.02543	3.2862	8.07930
103800	103286	993.40	9.9721	8.29342	1.1152	7.09265	3.2870	8.08129
104000	103484	993.53	9.9743	8.29523	1.1258	7.16050	3.2878	8.08327
104200	103682	993.66	9.9764	8.29705	1.1366	7.22898	3.2886	8.08526
104400	103880	993.79	9.9786	8.29886	1.1475	7.29809	3.2894	8.08724
104600	104078	993.92	9.9808	8.30067	1.1584	7.36784	3.2903	8.08923
104800	104276	994.05	9.9830	8.30248	1.1695	7.43824	3.2911	8.09121
105000	104474	994.18	9.9851 - 6	8.30429 - 1	1.1807 - 2	7.50929 + 1	3.2919 - 6	8.09320 - 1
105500	104969	994.51	9.9906	8.30882	1.2091	7.68982	3.2939	8.09816
106000	105464	995.41	1.0005 - 5	8.32119	1.2407	7.89090	3.2994	8.11173
106500	105959	996.33	1.0021	8.33385	1.2732	8.09747	3.3051	8.12561
107000	106454	997.24	1.0036	8.34650	1.3064	8.30904	3.3107	8.13949
107500	106949	998.16	1.0051	8.35914	1.3405	8.52572	3.3163	8.15336
108000	107444	999.07	1.0066	8.37176	1.3754	8.74761	3.3220	8.16723
108500	107938	999.99	1.0081	8.38438	1.4111	8.97485	3.3276	8.18108
109000	108433	1000.90	1.0097	8.39698	1.4477	9.20753	3.3332	8.19494
109500	108928	1001.81	1.0112	8.40957	1.4852	9.44580	3.3389	8.20878

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
110000	110583	1003.79	1.0145 - 5	8.43682 - 1	1.5694 - 2	9.98174 + 1	3.3511 - 6	8.23876 - 1
110500	111089	1004.71	1.0160	8.44951	1.6102	1.02412 + 2	3.3568	8.25274
111000	111594	1005.62	1.0175	8.46220	1.6520	1.05070	3.3624	8.26671
111500	112099	1006.54	1.0190	8.47487	1.6948	1.07791	3.3681	8.28067
112000	112605	1007.46	1.0205	8.48753	1.7386	1.10578	3.3738	8.29463
112500	113110	1008.37	1.0221	8.50018	1.7835	1.13431	3.3795	8.30858
113000	113616	1009.29	1.0236	8.51282	1.8294	1.16353	3.3851	8.32252
113500	114121	1010.20	1.0251	8.52546	1.8764	1.19344	3.3908	8.33646
114000	114627	1011.11	1.0266	8.53808	1.9246	1.22406	3.3965	8.35040
114500	115132	1012.03	1.0281	8.55069	1.9739	1.25541	3.4021	8.36433
115000	115638	1012.94	1.0297 - 5	8.56329 - 1	2.0243 - 2	1.28750 + 2	3.4078 - 6	8.37825 - 1
115500	116143	1013.85	1.0312	8.57588	2.0760	1.32036	3.4135	8.39217
116000	116649	1014.76	1.0327	8.58846	2.1289	1.35399	3.4191	8.40608
116500	117155	1015.67	1.0342	8.60103	2.1830	1.38841	3.4248	8.41999
117000	117660	1016.58	1.0357	8.61359	2.2384	1.42364	3.4304	8.43389
117500	118166	1017.48	1.0372	8.62614	2.2951	1.45970	3.4361	8.44778
118000	118672	1018.39	1.0387	8.63868	2.3531	1.49661	3.4417	8.46167
118500	119177	1019.30	1.0402	8.65121	2.4125	1.53438	3.4474	8.47555
119000	119683	1020.20	1.0417	8.66373	2.4733	1.57303	3.4530	8.48943
119500	120189	1021.11	1.0432	8.67624	2.5355	1.61259	3.4587	8.50330
120000	120695	1022.01	1.0447 - 5	8.68874 - 1	2.5991 - 2	1.65306 + 2	3.4643 - 6	8.51717 - 1
120500	121200	1022.91	1.0462	8.70123	2.6642	1.69448	3.4700	8.53103
121000	121706	1023.81	1.0477	8.71371	2.7309	1.73685	3.4756	8.54489
121500	122212	1024.72	1.0492	8.72618	2.7990	1.78021	3.4812	8.55873
122000	122718	1025.62	1.0507	8.73864	2.8688	1.82457	3.4869	8.57258
122500	123224	1026.52	1.0522	8.75109	2.9401	1.86996	3.4925	8.58642
123000	123730	1027.41	1.0537	8.76354	3.0131	1.91638	3.4981	8.60025
123500	124236	1028.31	1.0552	8.77597	3.0878	1.96388	3.5037	8.61407
124000	124742	1029.21	1.0567	8.78839	3.1642	2.01247	3.5094	8.62789
124500	125248	1030.11	1.0582	8.80080	3.2424	2.06217	3.5150	8.64171
125000	125754	1031.00	1.0597 - 5	8.81320 - 1	3.3223 - 2	2.11300 + 2	3.5206 - 6	8.65552 - 1
125500	126260	1031.90	1.0612	8.82559	3.4040	2.16500	3.5262	8.66932
126000	126766	1032.79	1.0627	8.83797	3.4877	2.21818	3.5318	8.68312
126500	127272	1033.68	1.0642	8.85035	3.5732	2.27257	3.5374	8.69691
127000	127778	1034.58	1.0657	8.86271	3.6606	2.32819	3.5430	8.71070
127500	128284	1035.47	1.0671	8.87506	3.7501	2.38508	3.5486	8.72448
128000	128791	1036.36	1.0686	8.88740	3.8415	2.44325	3.5542	8.73826
128500	129297	1037.25	1.0701	8.89974	3.9351	2.50273	3.5598	8.75203
129000	129803	1038.14	1.0716	8.91206	4.0307	2.56356	3.5654	8.76579
129500	130309	1039.03	1.0731	8.92438	4.1285	2.62575	3.5710	8.77955
130000	130816	1039.91	1.0746 - 5	8.93668 - 1	4.2285 - 2	2.68935 + 2	3.5766 - 6	8.79330 - 1
130500	131322	1040.80	1.0760	8.94898	4.3307	2.75436	3.5822	8.80705
131000	131828	1041.69	1.0775	8.96126	4.4352	2.82084	3.5878	8.82079
131500	132335	1042.57	1.0790	8.97354	4.5421	2.88880	3.5934	8.83452
132000	132841	1043.46	1.0805	8.98580	4.6513	2.95827	3.5990	8.84825
132500	133347	1044.34	1.0819	8.99806	4.7630	3.02930	3.6046	8.86198
133000	133854	1045.23	1.0834	9.01031	4.8771	3.10190	3.6101	8.87569
133500	134360	1046.11	1.0849	9.02254	4.9938	3.17611	3.6157	8.88941
134000	134867	1046.99	1.0863	9.03477	5.1131	3.25196	3.6213	8.90311
134500	135373	1047.87	1.0878	9.04699	5.2350	3.32950	3.6269	8.91682
135000	135880	1048.75	1.0893 - 5	9.05920 - 1	5.3596 - 2	3.40874 + 2	3.6324 - 6	8.93051 - 1
135500	136386	1049.63	1.0908	9.07140	5.4869	3.48974	3.6380	8.94420
136000	136893	1050.51	1.0922	9.08359	5.6171	3.57251	3.6436	8.95788
136500	137399	1051.39	1.0937	9.09577	5.7501	3.65710	3.6491	8.97156
137000	137906	1052.27	1.0951	9.10794	5.8860	3.74355	3.6547	8.98524
137500	138413	1053.14	1.0966	9.12011	6.0249	3.83188	3.6603	8.99890
138000	138919	1054.02	1.0981	9.13226	6.1668	3.92215	3.6658	9.01256
138500	139426	1054.89	1.0995	9.14440	6.3118	4.01439	3.6714	9.02622
139000	139933	1055.77	1.1010	9.15654	6.4600	4.10863	3.6769	9.03987
139500	140440	1056.64	1.1024	9.16866	6.6114	4.20493	3.6825	9.05351
140000	140946	1057.52	1.1039 - 5	9.18078 - 1	6.7661 - 2	4.30331 + 2	3.6880 - 6	9.06715 - 1
140500	141453	1058.39	1.1054	9.19289	6.9242	4.40383	3.6936	9.08079
141000	141960	1059.26	1.1068	9.20498	7.0856	4.50652	3.6991	9.09441
141500	142467	1060.13	1.1083	9.21707	7.2506	4.61142	3.7046	9.10804
142000	142974	1061.00	1.1097	9.22915	7.4191	4.71859	3.7102	9.12165
142500	143480	1061.87	1.1112	9.24122	7.5912	4.82806	3.7157	9.13526
143000	143987	1062.74	1.1126	9.25328	7.7670	4.93989	3.7213	9.14887
143500	144494	1063.61	1.1141	9.26533	7.9466	5.05411	3.7268	9.16247
144000	145001	1064.47	1.1155	9.27737	8.1301	5.17078	3.7323	9.17606
144500	145508	1065.34	1.1170	9.28941	8.3174	5.28995	3.7378	9.18965
145000	146015	1066.21	1.1184 - 5	9.30143 - 1	8.5088 - 2	5.41165 + 2	3.7434 - 6	9.20323 - 1
145500	146522	1067.07	1.1199	9.31345	8.7042	5.53595	3.7489	9.21680
146000	147029	1067.94	1.1213	9.32545	8.9038	5.66289	3.7544	9.23038
146500	147537	1068.80	1.1227	9.33745	9.1076	5.79253	3.7599	9.24394
147000	148044	1069.66	1.1242	9.34944	9.3158	5.92492	3.7654	9.25750
147500	148551	1070.53	1.1256	9.36141	9.5283	6.06010	3.7710	9.27105
148000	149058	1071.39	1.1271	9.37338	9.7454	6.19815	3.7765	9.28460
148500	149565	1072.25	1.1285	9.38535	9.9670	6.33910	3.7820	9.29814
149000	150072	1073.11	1.1299	9.39730	1.0193 - 1	6.48303	3.7875	9.31168
149500	150580	1073.97	1.1314	9.40924	1.0424	6.62997	3.7930	9.32521

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
110000	109423	1002.72	1.0127 - 5	8.42216 - 1	1.5235 - 2	9.68975 + 1	3.3445 - 6	8.22262 - 1
110500	109918	1003.63	1.0142	8.43473	1.5628	9.93953	3.3501	8.23646
111000	110412	1004.54	1.0157	8.44729	1.6030	1.01953 + 2	3.3558	8.25029
111500	110907	1005.45	1.0172	8.45984	1.6442	1.04571	3.3614	8.26411
112000	111402	1006.36	1.0187	8.47238	1.6863	1.07251	3.3670	8.27792
112500	111896	1007.27	1.0202	8.48491	1.7295	1.09995	3.3726	8.29173
113000	112391	1008.17	1.0217	8.49742	1.7736	1.12803	3.3782	8.30554
113500	112886	1009.08	1.0232	8.50993	1.8188	1.15678	3.3838	8.31933
114000	113380	1009.98	1.0247	8.52243	1.8651	1.18620	3.3895	8.33312
114500	113875	1010.89	1.0262	8.53492	1.9124	1.21632	3.3951	8.34691
115000	114369	1011.79	1.0277 - 5	8.54739 - 1	1.9609 - 2	1.24714 + 2	3.4007 - 6	8.36069 - 1
115500	114864	1012.69	1.0292	8.55986	2.0105	1.27869	3.4063	8.37446
116000	115358	1013.59	1.0307	8.57231	2.0612	1.31097	3.4119	8.38822
116500	115853	1014.49	1.0322	8.58476	2.1132	1.34400	3.4175	8.40198
117000	116347	1015.39	1.0337	8.59719	2.1663	1.37780	3.4231	8.41574
117500	116842	1016.29	1.0352	8.60961	2.2207	1.41239	3.4286	8.42948
118000	117336	1017.19	1.0367	8.62203	2.2764	1.44778	3.4342	8.44323
118500	117830	1018.08	1.0382	8.63443	2.3333	1.48399	3.4398	8.45696
119000	118325	1018.98	1.0397	8.64682	2.3915	1.52104	3.4454	8.47069
119500	118819	1019.87	1.0412	8.65920	2.4511	1.55894	3.4510	8.48441
120000	119313	1020.77	1.0427 - 5	8.67157 - 1	2.5121 - 2	1.59772 + 2	3.4566 - 6	8.49813 - 1
120500	119808	1021.66	1.0442	8.68394	2.5745	1.63738	3.4621	8.51184
121000	120302	1022.55	1.0456	8.69629	2.6383	1.67796	3.4677	8.52554
121500	120796	1023.45	1.0471	8.70863	2.7035	1.71946	3.4733	8.53924
122000	121290	1024.34	1.0486	8.72096	2.7703	1.76191	3.4789	8.55293
122500	121785	1025.23	1.0501	8.73328	2.8385	1.80534	3.4844	8.56661
123000	122279	1026.12	1.0516	8.74559	2.9084	1.84975	3.4900	8.58029
123500	122773	1027.01	1.0531	8.75789	2.9798	1.89516	3.4956	8.59397
124000	123267	1027.89	1.0545	8.77017	3.0528	1.94161	3.5011	8.60763
124500	123761	1028.78	1.0560	8.78245	3.1275	1.98911	3.5067	8.62129
125000	124255	1029.67	1.0575 - 5	8.79472 - 1	3.2039 - 2	2.03769 + 2	3.5122 - 6	8.63495 - 1
125500	124749	1030.55	1.0590	8.80698	3.2820	2.08736	3.5178	8.64859
126000	125243	1031.44	1.0604	8.81923	3.3618	2.13815	3.5233	8.66223
126500	125737	1032.32	1.0619	8.83147	3.4435	2.19008	3.5289	8.67587
127000	126231	1033.20	1.0634	8.84370	3.5270	2.24317	3.5344	8.68950
127500	126725	1034.08	1.0648	8.85591	3.6123	2.29746	3.5400	8.70312
128000	127219	1034.97	1.0663	8.86812	3.6996	2.35296	3.5455	8.71674
128500	127713	1035.85	1.0678	8.88032	3.7888	2.40970	3.5510	8.73035
129000	128207	1036.73	1.0692	8.89251	3.8800	2.46770	3.5566	8.74395
129500	128701	1037.61	1.0707	8.90469	3.9732	2.52699	3.5621	8.75755
130000	129195	1038.48	1.0722 - 5	8.91685 - 1	4.0685 - 2	2.58760 + 2	3.5676 - 6	8.77114 - 1
130500	129688	1039.36	1.0736	8.92901	4.1659	2.64955	3.5731	8.78473
131000	130182	1040.24	1.0751	8.94116	4.2655	2.71287	3.5787	8.79831
131500	130676	1041.11	1.0766	8.95330	4.3672	2.77759	3.5842	8.81188
132000	131170	1041.99	1.0780	8.96543	4.4712	2.84373	3.5897	8.82545
132500	131663	1042.86	1.0795	8.97755	4.5775	2.91133	3.5952	8.83901
133000	132157	1043.74	1.0809	8.98965	4.6861	2.98042	3.6007	8.85256
133500	132651	1044.61	1.0824	9.00175	4.7971	3.05102	3.6062	8.86611
134000	133144	1045.48	1.0838	9.01384	4.9106	3.12316	3.6118	8.87966
134500	133638	1046.35	1.0853	9.02592	5.0265	3.19688	3.6173	8.89319
135000	134132	1047.22	1.0867 - 5	9.03799 - 1	5.1449 - 2	3.27221 + 2	3.6228 - 6	8.90672 - 1
135500	134625	1048.09	1.0882	9.05005	5.2659	3.34918	3.6283	8.92025
136000	135119	1048.96	1.0896	9.06210	5.3896	3.42782	3.6338	8.93376
136500	135612	1049.83	1.0911	9.07414	5.5159	3.50817	3.6393	8.94727
137000	136106	1050.70	1.0925	9.08617	5.6450	3.59025	3.6448	8.96078
137500	136599	1051.56	1.0940	9.09819	5.7768	3.67412	3.6502	8.97428
138000	137093	1052.43	1.0954	9.11020	5.9115	3.75979	3.6557	8.98777
138500	137586	1053.29	1.0969	9.12220	6.0491	3.84730	3.6612	9.00126
139000	138080	1054.16	1.0983	9.13419	6.1897	3.93670	3.6667	9.01474
139500	138573	1055.02	1.0997	9.14618	6.3333	4.02802	3.6722	9.02821
140000	139066	1055.88	1.1012 - 5	9.15815 - 1	6.4799 - 2	4.12129 + 2	3.6777 - 6	9.04168 - 1
140500	139560	1056.75	1.1026	9.17011	6.6297	4.21656	3.6831	9.05514
141000	140053	1057.61	1.1041	9.18206	6.7827	4.31386	3.6886	9.06860
141500	140546	1058.47	1.1055	9.19401	6.9390	4.41324	3.6941	9.08205
142000	141040	1059.33	1.1069	9.20594	7.0985	4.51474	3.6995	9.09549
142500	141533	1060.19	1.1084	9.21786	7.2615	4.61839	3.7050	9.10893
143000	142026	1061.05	1.1098	9.22978	7.4279	4.72423	3.7105	9.12236
143500	142519	1061.90	1.1112	9.24168	7.5979	4.83232	3.7159	9.13579
144000	143012	1062.76	1.1127	9.25358	7.7714	4.94270	3.7214	9.14920
144500	143506	1063.62	1.1141	9.26547	7.9486	5.05540	3.7268	9.16262
145000	143999	1064.47	1.1155 - 5	9.27734 - 1	8.1296 - 2	5.17048 + 2	3.7323 - 6	9.17602 - 1
145500	144492	1065.33	1.1169	9.28921	8.3143	5.28797	3.7378	9.18942
146000	144985	1066.18	1.1184	9.30107	8.5029	5.40794	3.7432	9.20282
146500	145478	1067.03	1.1198	9.31292	8.6955	5.53041	3.7486	9.21621
147000	145971	1067.89	1.1212	9.32475	8.8921	5.65545	3.7541	9.22959
147500	146464	1068.74	1.1226	9.33658	9.0928	5.78310	3.7595	9.24296
148000	146957	1069.59	1.1241	9.34841	9.2977	5.91342	3.7650	9.25633
148500	147450	1070.44	1.1255	9.36022	9.5069	6.04644	3.7704	9.26970
149000	147943	1071.29	1.1269	9.37202	9.7204	6.18223	3.7758	9.28305
149500	148436	1072.14	1.1283	9.38381	9.9383	6.32084	3.7813	9.29640



TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
150000	151087	1074.83	1.1328 - 5	9.42117 - 1	1.0660 - 1	6.78001 + 2	3.7985 - 6	9.33874 - 1
150500	151594	1075.69	1.1342	9.43310	1.0901	6.93318	3.8040	9.35226
151000	152101	1076.54	1.1357	9.44501	1.1147	7.08957	3.8095	9.36577
151500	152609	1077.40	1.1371	9.45692	1.1398	7.24921	3.8150	9.37928
152000	153116	1078.26	1.1385	9.46882	1.1654	7.41219	3.8205	9.39278
152500	153623	1079.11	1.1400	9.48071	1.1916	7.57856	3.8260	9.40628
153000	154131	1079.97	1.1414	9.49259	1.2183	7.74839	3.8314	9.41977
153500	154638	1080.82	1.1428	9.50446	1.2455	7.92174	3.8369	9.43325
154000	155146	1081.68	1.1443	9.51632	1.2734	8.09868	3.8424	9.44673
154500	155653	1082.02	1.1448	9.52105	1.2996	8.26531	3.8446	9.45211
155000	156161	1082.02	1.1448 - 5	9.52105 - 1	1.3248 - 1	8.42584 + 2	3.8446 - 6	9.45211 - 1
155500	156668	1082.02	1.1448	9.52105	1.3505	8.58950	3.8446	9.45211
156000	157176	1082.02	1.1448	9.52105	1.3768	8.75634	3.8446	9.45211
156500	157683	1082.02	1.1448	9.52105	1.4035	8.92641	3.8446	9.45211
157000	158191	1082.02	1.1448	9.52105	1.4308	9.09979	3.8446	9.45211
157500	158699	1082.02	1.1448	9.52105	1.4586	9.27654	3.8446	9.45211
158000	159206	1082.02	1.1448	9.52105	1.4869	9.45672	3.8446	9.45211
158500	159714	1082.02	1.1448	9.52105	1.5158	9.64040	3.8446	9.45211
159000	160222	1082.02	1.1448	9.52105	1.5452	9.82764	3.8446	9.45211
159500	160729	1082.02	1.1448	9.52105	1.5752	1.00185 + 3	3.8446	9.45211
160000	161237	1082.02	1.1448 - 5	9.52105 - 1	1.6058 - 1	1.02131 + 3	3.8446 - 6	9.45211 - 1
160500	161745	1082.02	1.1448	9.52105	1.6370	1.04115	3.8446	9.45211
161000	162253	1082.02	1.1448	9.52105	1.6688	1.06137	3.8446	9.45211
161500	162761	1082.02	1.1448	9.52105	1.7012	1.08199	3.8446	9.45211
162000	163268	1082.02	1.1448	9.52105	1.7343	1.10300	3.8446	9.45211
162500	163776	1082.02	1.1448	9.52105	1.7679	1.12443	3.8446	9.45211
163000	164284	1082.02	1.1448	9.52105	1.8023	1.14627	3.8446	9.45211
163500	164792	1082.02	1.1448	9.52105	1.8373	1.16853	3.8446	9.45211
164000	165300	1082.02	1.1448	9.52105	1.8730	1.19123	3.8446	9.45211
164500	165808	1082.02	1.1448	9.52105	1.9094	1.21436	3.8446	9.45211
165000	166316	1082.02	1.1448 - 5	9.52105 - 1	1.9464 - 1	1.23795 + 3	3.8446 - 6	9.45211 - 1
165500	166824	1082.02	1.1448	9.52105	1.9842	1.26200	3.8446	9.45211
166000	167332	1082.02	1.1448	9.52105	2.0228	1.28651	3.8446	9.45211
166500	167840	1082.02	1.1448	9.52105	2.0621	1.31150	3.8446	9.45211
167000	168348	1082.02	1.1448	9.52105	2.1021	1.33697	3.8446	9.45211
167500	168856	1082.02	1.1448	9.52105	2.1430	1.36294	3.8446	9.45211
168000	169364	1082.02	1.1448	9.52105	2.1846	1.38941	3.8446	9.45211
168500	169873	1082.02	1.1448	9.52105	2.2270	1.41640	3.8446	9.45211
169000	170381	1082.02	1.1448	9.52105	2.2703	1.44391	3.8446	9.45211
169500	170889	1082.02	1.1448	9.52105	2.3144	1.47195	3.8446	9.45211
170000	171397	1082.02	1.1448 - 5	9.52105 - 1	2.3593 - 1	1.50054 + 3	3.8446 - 6	9.45211 - 1
170500	171906	1082.02	1.1448	9.52105	2.4051	1.52969	3.8446	9.45211
171000	172414	1081.53	1.1440	9.51434	2.4480	1.55692	3.8415	9.44448
171500	172922	1080.92	1.1430	9.50587	2.4905	1.58400	3.8376	9.43485
172000	173431	1080.31	1.1420	9.49739	2.5339	1.61159	3.8337	9.42522
172500	173939	1079.70	1.1410	9.48891	2.5781	1.63969	3.8297	9.41559
173000	174447	1079.09	1.1399	9.48042	2.6231	1.66831	3.8258	9.40595
173500	174956	1078.48	1.1389	9.47193	2.6689	1.69746	3.8219	9.39631
174000	175464	1077.87	1.1379	9.46343	2.7156	1.72715	3.8180	9.38667
174500	175973	1077.26	1.1369	9.45493	2.7632	1.75740	3.8141	9.37702
175000	176481	1076.65	1.1358 - 5	9.44643 - 1	2.8116 - 1	1.78822 + 3	3.8101 - 6	9.36737 - 1
175500	176990	1076.03	1.1348	9.43792	2.8610	1.81961	3.8062	9.35772
176000	177498	1075.42	1.1338	9.42940	2.9113	1.85158	3.8023	9.34806
176500	178007	1074.81	1.1328	9.42088	2.9625	1.88416	3.7983	9.33841
177000	178515	1074.19	1.1317	9.41236	3.0147	1.91734	3.7944	9.32875
177500	179024	1073.58	1.1307	9.40383	3.0678	1.95115	3.7905	9.31908
178000	179533	1072.97	1.1297	9.39530	3.1220	1.98560	3.7866	9.30942
178500	180041	1072.35	1.1287	9.38676	3.1771	2.02069	3.7826	9.29975
179000	180550	1071.74	1.1276	9.37822	3.2334	2.05644	3.7787	9.29008
179500	181059	1071.12	1.1266	9.36967	3.2906	2.09287	3.7748	9.28040
180000	181567	1070.51	1.1256 - 5	9.36112 - 1	3.3490 - 1	2.12998 + 3	3.7708 - 6	9.27072 - 1
180500	182076	1069.89	1.1246	9.35257	3.4084	2.16780	3.7669	9.26104
181000	182585	1069.27	1.1235	9.34401	3.4690	2.20633	3.7629	9.25136
181500	183094	1068.66	1.1225	9.33544	3.5308	2.24560	3.7590	9.24167
182000	183602	1068.04	1.1215	9.32687	3.5937	2.28560	3.7551	9.23198
182500	184111	1067.42	1.1204	9.31830	3.6578	2.32637	3.7511	9.22229
183000	184620	1066.80	1.1194	9.30972	3.7231	2.36791	3.7472	9.21260
183500	185129	1066.19	1.1184	9.30114	3.7896	2.41024	3.7432	9.20290
184000	185638	1065.57	1.1173	9.29255	3.8575	2.45338	3.7393	9.19320
184500	186147	1064.95	1.1163	9.28396	3.9266	2.49734	3.7353	9.18349
185000	186656	1064.33	1.1153 - 5	9.27536 - 1	3.9970 - 1	2.54214 + 3	3.7314 - 6	9.17379 - 1
185500	187165	1063.71	1.1142	9.26676	4.0688	2.58780	3.7274	9.16408
186000	187674	1063.09	1.1132	9.25815	4.1420	2.63433	3.7235	9.15436
186500	188183	1062.47	1.1122	9.24954	4.2165	2.68175	3.7195	9.14465
187000	188692	1061.85	1.1111	9.24093	4.2925	2.73009	3.7156	9.13493
187500	189201	1061.23	1.1101	9.23231	4.3700	2.77935	3.7116	9.12521
188000	189710	1060.61	1.1091	9.22368	4.4489	2.82956	3.7077	9.11549
188500	190220	1059.98	1.1080	9.21505	4.5294	2.88073	3.7037	9.10576
189000	190729	1059.36	1.1070	9.20642	4.6114	2.93289	3.6998	9.09603
189500	191238	1058.74	1.1059	9.19778	4.6950	2.98606	3.6958	9.08630

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
150000	148929	1072.99	1.1297 - 5	9.39559 - 1	1.0161 - 1	6.46232 + 2	3.7867 - 6	9.30975 - 1
150500	149422	1073.83	1.1311	9.40737	1.0388	6.60672	3.7921	9.32309
151000	149914	1074.68	1.1326	9.41913	1.0620	6.75411	3.7975	9.33642
151500	150407	1075.53	1.1340	9.43089	1.0856	6.90453	3.8030	9.34975
152000	150900	1076.37	1.1354	9.44263	1.1097	7.05805	3.8084	9.36307
152500	151393	1077.22	1.1368	9.45437	1.1344	7.21471	3.8138	9.37638
153000	151886	1078.06	1.1382	9.46610	1.1595	7.37460	3.8192	9.38969
153500	152378	1078.91	1.1396	9.47782	1.1852	7.53775	3.8246	9.40299
154000	152871	1079.75	1.1410	9.48953	1.2113	7.70424	3.8300	9.41629
154500	153364	1080.59	1.1424	9.50123	1.2381	7.87413	3.8354	9.42958
155000	153856	1081.43	1.1438 - 5	9.51292 - 1	1.2653 - 1	8.04748 + 2	3.8408 - 6	9.44286 - 1
155500	154349	1082.02	1.1448	9.52105	1.2920	8.21743	3.8466	9.45211
156000	154842	1082.02	1.1448	9.52105	1.3168	8.37465	3.8466	9.45211
156500	155334	1082.02	1.1448	9.52105	1.3419	8.53488	3.8466	9.45211
157000	155827	1082.02	1.1448	9.52105	1.3676	8.69817	3.8466	9.45211
157500	156319	1082.02	1.1448	9.52105	1.3938	8.86457	3.8466	9.45211
158000	156812	1082.02	1.1448	9.52105	1.4204	9.03415	3.8466	9.45211
158500	157304	1082.02	1.1448	9.52105	1.4476	9.20696	3.8466	9.45211
159000	157797	1082.02	1.1448	9.52105	1.4753	9.38307	3.8466	9.45211
159500	158289	1082.02	1.1448	9.52105	1.5035	9.56255	3.8466	9.45211
160000	158782	1082.02	1.1448 - 5	9.52105 - 1	1.5323 - 1	9.74544 + 2	3.8466 - 6	9.45211 - 1
160500	159274	1082.02	1.1448	9.52105	1.5616	9.93182	3.8466	9.45211
161000	159766	1082.02	1.1448	9.52105	1.5915	1.01218 + 3	3.8466	9.45211
161500	160259	1082.02	1.1448	9.52105	1.6219	1.03153	3.8466	9.45211
162000	160751	1082.02	1.1448	9.52105	1.6529	1.05126	3.8466	9.45211
162500	161243	1082.02	1.1448	9.52105	1.6845	1.07136	3.8466	9.45211
163000	161736	1082.02	1.1448	9.52105	1.7167	1.09184	3.8466	9.45211
163500	162228	1082.02	1.1448	9.52105	1.7495	1.11272	3.8466	9.45211
164000	162720	1082.02	1.1448	9.52105	1.7830	1.13399	3.8466	9.45211
164500	163212	1082.02	1.1448	9.52105	1.8171	1.15567	3.8466	9.45211
165000	163705	1082.02	1.1448 - 5	9.52105 - 1	1.8518 - 1	1.17777 + 3	3.8466 - 6	9.45211 - 1
165500	164197	1082.02	1.1448	9.52105	1.8872	1.20028	3.8466	9.45211
166000	164689	1082.02	1.1448	9.52105	1.9233	1.22322	3.8466	9.45211
166500	165181	1082.02	1.1448	9.52105	1.9600	1.24661	3.8466	9.45211
167000	165673	1082.02	1.1448	9.52105	1.9975	1.27043	3.8466	9.45211
167500	166165	1082.02	1.1448	9.52105	2.0357	1.29471	3.8466	9.45211
168000	166657	1082.02	1.1448	9.52105	2.0746	1.31946	3.8466	9.45211
168500	167149	1082.02	1.1448	9.52105	2.1142	1.34467	3.8466	9.45211
169000	167641	1082.02	1.1448	9.52105	2.1546	1.37037	3.8466	9.45211
169500	168133	1082.02	1.1448	9.52105	2.1958	1.39655	3.8466	9.45211
170000	168625	1082.02	1.1448 - 5	9.52105 - 1	2.2378 - 1	1.42324 + 3	3.8466 - 6	9.45211 - 1
170500	169117	1082.02	1.1448	9.52105	2.2805	1.45043	3.8466	9.45211
171000	169609	1082.02	1.1448	9.52105	2.3241	1.47815	3.8466	9.45211
171500	170101	1082.02	1.1448	9.52105	2.3685	1.50639	3.8466	9.45211
172000	170593	1082.02	1.1448	9.52105	2.4137	1.53516	3.8466	9.45211
172500	171085	1081.43	1.1438	9.51290	2.4551	1.56147	3.8408	9.44285
173000	171577	1080.83	1.1428	9.50457	2.4971	1.58819	3.8370	9.43338
173500	172068	1080.23	1.1418	9.49623	2.5399	1.61540	3.8331	9.42390
174000	172560	1079.63	1.1408	9.48789	2.5835	1.64310	3.8293	9.41443
174500	173052	1079.03	1.1398	9.47954	2.6278	1.67130	3.8254	9.40495
175000	173544	1078.43	1.1388 - 5	9.47119 - 1	2.6730 - 1	1.70003 + 3	3.8216 - 6	9.39547 - 1
175500	174035	1077.83	1.1378	9.46283	2.7189	1.72927	3.8177	9.38599
176000	174527	1077.23	1.1368	9.45447	2.7658	1.75905	3.8138	9.37650
176500	175019	1076.62	1.1358	9.44611	2.8134	1.78937	3.8100	9.36701
177000	175510	1076.02	1.1348	9.43774	2.8620	1.82025	3.8061	9.35752
177500	176002	1075.42	1.1338	9.42937	2.9114	1.85170	3.8023	9.34803
178000	176493	1074.82	1.1328	9.42099	2.9618	1.88372	3.7984	9.33853
178500	176985	1074.21	1.1318	9.41262	3.0131	1.91634	3.7945	9.32904
179000	177477	1073.61	1.1308	9.40423	3.0653	1.94955	3.7907	9.31954
179500	177968	1073.01	1.1298	9.39584	3.1185	1.98338	3.7868	9.31003
180000	178460	1072.40	1.1288 - 5	9.38745 - 1	3.1726 - 1	2.01782 + 3	3.7829 - 6	9.30053 - 1
180500	178951	1071.80	1.1277	9.37906	3.2278	2.05291	3.7791	9.29102
181000	179442	1071.19	1.1267	9.37066	3.2840	2.08864	3.7752	9.28151
181500	179934	1070.59	1.1257	9.36225	3.3412	2.12503	3.7713	9.27200
182000	180425	1069.98	1.1247	9.35385	3.3995	2.16210	3.7675	9.26249
182500	180917	1069.38	1.1237	9.34544	3.4588	2.19986	3.7636	9.25297
183000	181408	1068.77	1.1227	9.33702	3.5193	2.23831	3.7597	9.24346
183500	181899	1068.16	1.1217	9.32860	3.5809	2.27748	3.7559	9.23393
184000	182391	1067.56	1.1207	9.32018	3.6436	2.31738	3.7520	9.22441
184500	182882	1066.95	1.1197	9.31175	3.7075	2.35802	3.7481	9.21489
185000	183373	1066.34	1.1186 - 5	9.30332 - 1	3.7726 - 1	2.39943 + 3	3.7442 - 6	9.20536 - 1
185500	183864	1065.74	1.1176	9.29488	3.8389	2.44160	3.7404	9.19583
186000	184356	1065.13	1.1166	9.28644	3.9065	2.48456	3.7365	9.18630
186500	184847	1064.52	1.1156	9.27800	3.9753	2.52832	3.7326	9.17676
187000	185338	1063.91	1.1146	9.26955	4.0454	2.57290	3.7287	9.16722
187500	185829	1063.30	1.1136	9.26110	4.1168	2.61832	3.7248	9.15768
188000	186320	1062.69	1.1125	9.25264	4.1896	2.66459	3.7210	9.14814
188500	186811	1062.08	1.1115	9.24418	4.2637	2.71173	3.7171	9.13860
189000	187302	1061.47	1.1105	9.23571	4.3392	2.75976	3.7132	9.12905
189500	187793	1060.86	1.1095	9.22724	4.4161	2.80869	3.7093	9.11950

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
190000	191747	1058.12	1.1049 - 5	9.18913 - 1	4.7802 - 1	3.04026 + 3	3.6918 - 6	9.07656 - 1
190500	192256	1057.49	1.1039	9.18048	4.8671	3.09550	3.6879	9.06682
191000	192766	1056.87	1.1028	9.17183	4.9556	3.15181	3.6839	9.05708
191500	193275	1056.25	1.1018	9.16317	5.0459	3.20922	3.6800	9.04734
192000	193784	1055.62	1.1007	9.15451	5.1379	3.26774	3.6760	9.03759
192500	194294	1055.00	1.0997	9.14584	5.2317	3.32740	3.6720	9.02784
193000	194803	1054.37	1.0987	9.13717	5.3273	3.38821	3.6681	9.01809
193500	195312	1053.75	1.0976	9.12849	5.4248	3.45022	3.6641	9.00833
194000	195822	1053.12	1.0966	9.11981	5.5242	3.51343	3.6601	8.99857
194500	196331	1052.50	1.0955	9.11112	5.6255	3.57787	3.6562	8.98881
195000	196841	1051.87	1.0945 - 5	9.10243 - 1	5.7288 - 1	3.64358 + 3	3.6522 - 6	8.97904 - 1
195500	197350	1051.24	1.0934	9.09374	5.8342	3.71057	3.6482	8.96928
196000	197860	1050.61	1.0924	9.08504	5.9416	3.77888	3.6442	8.95951
196500	198369	1049.99	1.0913	9.07633	6.0511	3.84852	3.6403	8.94973
197000	198879	1049.36	1.0903	9.06762	6.1627	3.91954	3.6363	8.93996
197500	199388	1048.73	1.0892	9.05890	6.2766	3.99195	3.6323	8.93018
198000	199898	1048.10	1.0882	9.05018	6.3927	4.06578	3.6283	8.92040
198500	200408	1047.47	1.0872	9.04146	6.5110	4.14107	3.6243	8.91061
199000	200917	1046.84	1.0861	9.03273	6.6318	4.21785	3.6204	8.90082
199500	201427	1046.21	1.0851	9.02399	6.7549	4.29614	3.6164	8.89103
200000	201937	1045.58	1.0840 - 5	9.01525 - 1	6.8804 - 1	4.37599 + 3	3.6124 - 6	8.88124 - 1
200500	202447	1044.99	1.0822	9.00606	6.9972	4.45028	3.6055	8.86421
201000	202956	1044.22	1.0801	8.99255	7.1122	4.52342	3.5975	8.84641
201500	203466	1043.96	1.0780	8.97950	7.2294	4.59794	3.5895	8.82499
202000	203976	1043.69	1.0759	8.96747	7.3488	4.67387	3.5815	8.80536
202500	204486	1043.42	1.0737	8.95590	7.4704	4.75124	3.5735	8.78572
203000	204996	1043.16	1.0716	8.94231	7.5943	4.83007	3.5656	8.76607
203500	205506	1042.88	1.0695	8.92970	7.7207	4.91040	3.5576	8.74640
204000	206015	1042.61	1.0674	8.91708	7.8494	4.99227	3.5496	8.72673
204500	206525	1042.34	1.0653	8.90443	7.9805	5.07570	3.5415	8.70704
205000	207035	1042.06	1.0631 - 5	8.89176 - 1	8.1142 - 1	5.16073 + 3	3.5335 - 6	8.68734 - 1
205500	207545	1041.79	1.0610	8.87907	8.2505	5.24739	3.5255	8.66763
206000	208055	1041.51	1.0589	8.86637	8.3894	5.33572	3.5175	8.64791
206500	208565	1041.23	1.0568	8.85364	8.5309	5.42575	3.5095	8.62817
207000	209075	1040.95	1.0546	8.84089	8.6752	5.51753	3.5014	8.60843
207500	209586	1040.66	1.0525	8.82823	8.8223	5.61109	3.4934	8.58867
208000	210096	1040.38	1.0503	8.81554	8.9723	5.70646	3.4854	8.56890
208500	210606	1040.09	1.0482	8.80283	9.1252	5.80370	3.4773	8.54912
209000	211116	1039.80	1.0461	8.79010	9.2811	5.90283	3.4693	8.52933
209500	211626	1039.51	1.0439	8.77735	9.4400	6.00391	3.4612	8.50953
210000	212136	1039.22	1.0418 - 5	8.76460 - 1	9.6020 - 1	6.10697 + 3	3.4531 - 6	8.48971 - 1
210500	212647	1038.93	1.0396	8.75185	9.7673	6.21206	3.4451	8.46989
211000	213157	1038.63	1.0375	8.73907	9.9358	6.31922	3.4370	8.45005
211500	213667	1038.34	1.0353	8.72626	1.0108 + 0	6.42851	3.4289	8.43020
212000	214177	1038.04	1.0331	8.71341	1.0283	6.53996	3.4209	8.41034
212500	214688	1037.74	1.0310	8.70054	1.0462	6.65363	3.4128	8.39046
213000	215198	1037.44	1.0288	8.68764	1.0644	6.76956	3.4047	8.37058
213500	215709	1037.13	1.0267	8.67471	1.0830	6.88781	3.3966	8.35068
214000	216219	1036.83	1.0245	8.66176	1.1019	7.00843	3.3885	8.33077
214500	216729	1036.52	1.0223	8.64881	1.1213	7.13147	3.3804	8.31085
215000	217240	1036.21	1.0201 - 5	8.63584 - 1	1.1410 + 0	7.25698 + 3	3.3723 - 6	8.29092 - 1
215500	217750	1035.90	1.0180	8.62289	1.1612	7.38503	3.3642	8.27098
216000	218261	1035.59	1.0158	8.60994	1.1817	7.51568	3.3561	8.25103
216500	218771	1035.28	1.0136	8.59699	1.2027	7.64897	3.3479	8.23106
217000	219282	1034.96	1.0114	8.58404	1.2240	7.78498	3.3398	8.21108
217500	219793	1034.65	1.0092	8.57109	1.2459	7.92375	3.3317	8.19109
218000	220303	1034.33	1.0071	8.55814	1.2681	8.06537	3.3235	8.17109
218500	220814	1034.01	1.0049	8.54519	1.2908	8.20989	3.3154	8.15108
219000	221324	1033.69	1.0027	8.53224	1.3140	8.35738	3.3073	8.13106
219500	221835	1033.36	1.0005	8.51929	1.3377	8.50791	3.2991	8.11102
220000	222346	1033.04	9.9827 - 6	8.50634 - 1	1.3619 + 0	8.66154 + 3	3.2910 - 6	8.09097 - 1
220500	222857	1032.71	9.9607	8.49339	1.3865	8.81836	3.2828	8.07092
221000	223367	1032.38	9.9387	8.48044	1.4117	8.97844	3.2746	8.05085
221500	223878	1032.05	9.9166	8.46749	1.4374	9.14185	3.2665	8.03076
222000	224389	1031.72	9.8945	8.45454	1.4636	9.30867	3.2583	8.01067
222500	224900	1031.39	9.8724	8.44159	1.4904	9.47899	3.2501	7.99057
223000	225411	1031.05	9.8502	8.42864	1.5177	9.65288	3.2419	7.97045
223500	225922	1030.72	9.8281	8.41569	1.5456	9.83042	3.2338	7.95032
224000	226432	1030.39	9.8059	8.40274	1.5741	1.00117 + 4	3.2256	7.93018
224500	226943	1030.06	9.7836	8.38979	1.6033	1.01968	3.2174	7.91003
225000	227454	1029.73	9.7614 - 6	8.37684 - 1	1.6330 + 0	1.03859 + 4	3.2092 - 6	7.88987 - 1
225500	227965	1029.40	9.7391	8.36389	1.6633	1.05790	3.2010	7.86970
226000	228476	1029.07	9.7168	8.35094	1.6943	1.07762	3.1927	7.84951
226500	228987	1028.74	9.6945	8.33799	1.7260	1.09776	3.1845	7.82932
227000	229498	1028.41	9.6721	8.32504	1.7584	1.11833	3.1763	7.80911
227500	230009	1028.08	9.6497	8.31209	1.7914	1.13935	3.1681	7.78889
228000	230521	1027.75	9.6273	8.29914	1.8252	1.16082	3.1599	7.76866
228500	231032	1027.42	9.6049	8.28619	1.8596	1.18275	3.1516	7.74842
229000	231543	1027.09	9.5824	8.27324	1.8949	1.20516	3.1434	7.72816
229500	232054	1026.76	9.5599	8.26029	1.9309	1.22805	3.1351	7.70790

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
190000	188284	1060.25	1.1085 - 5	9.21877 - 1	4.4945 - 1	2.85855 + 3	3.7054 - 6	9.10995 - 1
190500	188775	1059.64	1.1075	9.21029	4.5744	2.90934	3.7015	9.10040
191000	189266	1059.03	1.1064	9.20181	4.6557	2.96109	3.6977	9.09084
191500	189757	1058.42	1.1054	9.19333	4.7387	3.01382	3.6938	9.08128
192000	190248	1057.81	1.1044	9.18484	4.8231	3.06755	3.6899	9.07172
192500	190739	1057.20	1.1034	9.17634	4.9092	3.12230	3.6860	9.06216
193000	191230	1056.58	1.1023	9.16785	4.9969	3.17809	3.6821	9.05260
193500	191721	1055.97	1.1013	9.15935	5.0863	3.23494	3.6782	9.04303
194000	192212	1055.36	1.1003	9.15084	5.1774	3.29286	3.6743	9.03346
194500	192703	1054.74	1.0993	9.14233	5.2702	3.35189	3.6704	9.02389
195000	193193	1054.13	1.0983	9.13381	5.3648 - 1	3.41205 + 3	3.6665 - 6	9.01431 - 1
195500	193684	1053.52	1.0972	9.12530	5.4612	3.47335	3.6626	9.00474
196000	194175	1052.90	1.0962	9.11677	5.5594	3.53583	3.6587	8.99516
196500	194666	1052.29	1.0952	9.10825	5.6595	3.59949	3.6548	8.98558
197000	195156	1051.67	1.0942	9.09971	5.7615	3.66438	3.6509	8.97599
197500	195647	1051.06	1.0931	9.09118	5.8655	3.73051	3.6470	8.96640
198000	196138	1050.44	1.0921	9.08264	5.9715	3.79791	3.6431	8.95682
198500	196628	1049.83	1.0911	9.07410	6.0795	3.86660	3.6392	8.94723
199000	197119	1049.21	1.0900	9.06555	6.1896	3.93662	3.6353	8.93763
199500	197609	1048.59	1.0890	9.05700	6.3018	4.00798	3.6314	8.92804
200000	198100	1047.98	1.0880	9.04844 - 1	6.4161 - 1	4.08072 + 3	3.6275 - 6	8.91844 - 1
200500	198591	1047.36	1.0870	9.03988	6.5327	4.15486	3.6236	8.90884
201000	199081	1046.74	1.0859	9.03131	6.6515	4.23043	3.6197	8.89924
201500	199572	1046.12	1.0849	9.02274	6.7727	4.30747	3.6158	8.88963
202000	200062	1045.50	1.0839	9.01417	6.8961	4.38599	3.6119	8.88002
202500	200552	1044.88	1.0829	8.99822	7.0092	4.45789	3.6080	8.87041
203000	201043	1044.26	1.0819	8.98105	7.1222	4.52975	3.6041	8.86080
203500	201533	1043.64	1.0809	8.96385	7.2372	4.60295	3.5999	8.85119
204000	202024	1043.02	1.0799	8.94664	7.3544	4.67749	3.5958	8.84158
204500	202514	1042.40	1.0789	8.92941	7.4738	4.75341	3.5917	8.83197
205000	203004	1041.78	1.0779	8.91216 - 1	7.5954 - 1	4.83075 + 3	3.5876	8.82236
205500	203495	1041.16	1.0769	8.89499	7.7193	4.90952	3.5835	8.81275
206000	203985	1040.54	1.0759	8.87781	7.8454	4.98976	3.5794	8.80314
206500	204475	1039.92	1.0749	8.86063	7.9740	5.07150	3.5753	8.79353
207000	204966	1039.30	1.0739	8.84345	8.1049	5.15478	3.5712	8.78392
207500	205456	1038.68	1.0729	8.82627	8.2383	5.23961	3.5671	8.77431
208000	205946	1038.06	1.0719	8.80909	8.3742	5.32604	3.5630	8.76470
208500	206436	1037.44	1.0709	8.79191	8.5126	5.41411	3.5589	8.75509
209000	206926	1036.82	1.0699	8.77473	8.6537	5.50384	3.5548	8.74548
209500	207416	1036.20	1.0689	8.75755	8.7975	5.59527	3.5507	8.73587
210000	207906	1035.58	1.0679	8.74037	8.9440 - 1	5.68843 + 3	3.5466	8.72626
210500	208396	1034.96	1.0669	8.72319	9.0932	5.78337	3.5425	8.71665
211000	208886	1034.34	1.0659	8.70601	9.2454	5.88012	3.5384	8.70704
211500	209376	1033.72	1.0649	8.68883	9.4004	5.97873	3.5343	8.69743
212000	209866	1033.10	1.0639	8.67165	9.5584	6.07922	3.5302	8.68782
212500	210356	1032.48	1.0629	8.65447	9.7194	6.18165	3.5261	8.67821
213000	210846	1031.86	1.0619	8.63729	9.8836	6.28605	3.5220	8.66860
213500	211336	1031.24	1.0609	8.62011	1.0051 + 0	6.39247	3.5179	8.65899
214000	211826	1030.62	1.0599	8.60293	1.0221	6.50095	3.5138	8.64938
214500	212316	1030.00	1.0589	8.58575	1.0395	6.61153	3.5097	8.63977
215000	212806	1029.38	1.0579	8.56857	1.0573 + 0	6.72427 + 3	3.5056	8.63016
215500	213296	1028.76	1.0569	8.55139	1.0753	6.83920	3.5015	8.62055
216000	213786	1028.14	1.0559	8.53421	1.0938	6.95638	3.4974	8.61094
216500	214275	1027.52	1.0549	8.51703	1.1125	7.07586	3.4933	8.60133
217000	214765	1026.90	1.0539	8.50000	1.1317	7.19769	3.4892	8.59172
217500	215255	1026.28	1.0529	8.48282	1.1512	7.32191	3.4851	8.58211
218000	215745	1025.66	1.0519	8.46564	1.1711	7.44859	3.4810	8.57250
218500	216234	1025.04	1.0509	8.44846	1.1915	7.57778	3.4769	8.56289
219000	216724	1024.42	1.0499	8.43128	1.2122	7.70953	3.4728	8.55328
219500	217214	1023.80	1.0489	8.41410	1.2333	7.84390	3.4687	8.54367
220000	217703	1023.18	1.0479	8.39692	1.2548 + 0	7.98095 + 3	3.4646	8.53406
220500	218193	1022.56	1.0469	8.37974	1.2768	8.12073	3.4605	8.52445
221000	218682	1021.94	1.0459	8.36256	1.2992	8.26332	3.4564	8.51484
221500	219172	1021.32	1.0449	8.34538	1.3221	8.40878	3.4523	8.50523
222000	219661	1020.70	1.0439	8.32820	1.3454	8.55716	3.4482	8.49562
222500	220151	1020.08	1.0429	8.31102	1.3692	8.70854	3.4441	8.48601
223000	220640	1019.46	1.0419	8.29384	1.3935	8.86299	3.4400	8.47640
223500	221130	1018.84	1.0409	8.27666	1.4183	9.02056	3.4359	8.46679
224000	221619	1018.22	1.0399	8.25948	1.4436	9.18135	3.4318	8.45718
224500	222109	1017.60	1.0389	8.24230	1.4694	9.34541	3.4277	8.44757
225000	222598	1016.98	1.0379	8.22512	1.4957 + 0	9.51283 + 3	3.4236	8.43796
225500	223087	1016.36	1.0369	8.20794	1.5226	9.68368	3.4195	8.42835
226000	223577	1015.74	1.0359	8.19076	1.5500	9.85804	3.4154	8.41874
226500	224066	1015.12	1.0349	8.17358	1.5780	1.00360 + 4	3.4113	8.40913
227000	224555	1014.50	1.0339	8.15640	1.6065	1.02176	3.4072	8.40000
227500	225044	1013.88	1.0329	8.13922	1.6357	1.04030	3.4031	8.39087
228000	225534	1013.26	1.0319	8.12204	1.6654	1.05923	3.3990	8.38174
228500	226023	1012.64	1.0309	8.10486	1.6958	1.07854	3.3949	8.37261
229000	226512	1012.02	1.0299	8.08768	1.7268	1.09827	3.3908	8.36348
229500	227002	1011.40	1.0289	8.07050	1.7585	1.11840	3.3867	8.35435

TABLE VI.—Continued  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
230000	232565	967.15	9.5374 - 6	7.93194 - 1	1.9677 + 0	1.25145 + 4	3.1269 - 6	7.68762 - 1
230500	233076	965.78	9.5149	7.91319	2.0052	1.27535	3.1186	7.66733
231000	233588	964.42	9.4923	7.89442	2.0437	1.29978	3.1104	7.64704
231500	234099	963.05	9.4697	7.87562	2.0829	1.32475	3.1021	7.62673
232000	234610	961.68	9.4471	7.85680	2.1230	1.35026	3.0939	7.60640
232500	235122	960.31	9.4244	7.83796	2.1640	1.37634	3.0856	7.58607
233000	235633	958.93	9.4017	7.81910	2.2060	1.40300	3.0773	7.56573
233500	236144	957.56	9.3790	7.80021	2.2488	1.43025	3.0690	7.54537
234000	236656	956.18	9.3563	7.78130	2.2926	1.45811	3.0608	7.52500
234500	237167	954.80	9.3335	7.76237	2.3374	1.48659	3.0525	7.50462
235000	237679	953.42	9.3107 - 6	7.74341 - 1	2.3832 + 0	1.51571 + 4	3.0442 - 6	7.48423 - 1
235500	238190	952.03	9.2879	7.72443	2.4300	1.54549	3.0359	7.46383
236000	238702	950.65	9.2651	7.70543	2.4778	1.57593	3.0276	7.44342
236500	239213	949.26	9.2422	7.68640	2.5268	1.60707	3.0193	7.42300
237000	239725	947.87	9.2193	7.66735	2.5769	1.63891	3.0110	7.40256
237500	240236	946.48	9.1963	7.64828	2.6281	1.67147	3.0026	7.38212
238000	240748	945.08	9.1734	7.62918	2.6804	1.70477	2.9943	7.36166
238500	241259	943.69	9.1504	7.61006	2.7340	1.73884	2.9860	7.34119
239000	241771	942.29	9.1274	7.59091	2.7888	1.77369	2.9777	7.32071
239500	242283	940.89	9.1043	7.57174	2.8448	1.80934	2.9693	7.30022
240000	242794	939.48	9.0812 - 6	7.55255 - 1	2.9022 + 0	1.84581 + 4	2.9610 - 6	7.27972 - 1
240500	243306	938.08	9.0581	7.53334	2.9609	1.88313	2.9526	7.25921
241000	243818	936.67	9.0350	7.51410	3.0209	1.92131	2.9443	7.23868
241500	244330	935.27	9.0118	7.49483	3.0823	1.96038	2.9359	7.21815
242000	244842	933.85	8.9887	7.47554	3.1452	2.00037	2.9276	7.19760
242500	245353	932.44	8.9654	7.45623	3.2095	2.04129	2.9192	7.17704
243000	245865	931.03	8.9422	7.43689	3.2754	2.08317	2.9109	7.15647
243500	246377	929.61	8.9189	7.41753	3.3428	2.12603	2.9025	7.13590
244000	246889	928.19	8.8956	7.39815	3.4118	2.16991	2.8941	7.11531
244500	247401	926.77	8.8723	7.37874	3.4824	2.21483	2.8857	7.09470
245000	247913	925.34	8.8489 - 6	7.35930 - 1	3.5547 + 0	2.26081 + 4	2.8774 - 6	7.07409 - 1
245500	248425	923.92	8.8255	7.33984	3.6287	2.30789	2.8690	7.05347
246000	248937	922.5	8.802	7.3204	3.705	2.3561	2.861	7.0328
246500	249449	921.1	8.779	7.3009	3.782	2.4055	2.852	7.0122
247000	249961	919.6	8.755	7.2813	3.862	2.4560	2.844	6.9915
247500	250473	918.2	8.732	7.2618	3.943	2.5078	2.835	6.9709
248000	250985	916.8	8.708	7.2422	4.026	2.5608	2.827	6.9502
248500	251497	915.3	8.684	7.2226	4.112	2.6151	2.819	6.9295
249000	252009	913.9	8.661	7.2029	4.199	2.6707	2.810	6.9088
249500	252521	912.4	8.637	7.1833	4.289	2.7277	2.802	6.8881
250000	253034	911.0	8.614 - 6	7.1636 - 1	4.381 + 0	2.7861 + 4	2.793 - 6	6.8674 - 1
250500	253546	909.5	8.590	7.1439	4.475	2.8459	2.785	6.8466
251000	254058	908.1	8.566	7.1242	4.571	2.9072	2.776	6.8259
251500	254570	906.6	8.542	7.1044	4.670	2.9701	2.768	6.8051
252000	255083	905.2	8.519	7.0846	4.771	3.0344	2.760	6.7844
252500	255595	903.7	8.495	7.0648	4.875	3.1004	2.751	6.7636
253000	256107	902.3	8.471	7.0450	4.981	3.1680	2.743	6.7428
253500	256620	900.8	8.447	7.0251	5.090	3.2373	2.734	6.7220
254000	257132	899.3	8.423	7.0052	5.202	3.3084	2.726	6.7012
254500	257645	897.9	8.399	6.9853	5.316	3.3812	2.717	6.6804
255000	258157	896.4	8.375 - 6	6.9654 - 1	5.434 + 0	3.4559 + 4	2.709 - 6	6.6596 - 1
255500	258669	894.9	8.351	6.9454	5.554	3.5325	2.700	6.6387
256000	259182	893.4	8.327	6.9254	5.678	3.6110	2.692	6.6179
256500	259694	892.0	8.303	6.9054	5.804	3.6916	2.683	6.5970
257000	260207	890.5	8.279	6.8854	5.934	3.7742	2.675	6.5762
257500	260720	889.0	8.255	6.8653	6.067	3.8589	2.666	6.5553
258000	261232	887.5	8.231	6.8452	6.204	3.9458	2.658	6.5344
258500	261745	886.0	8.207	6.8251	6.344	4.0349	2.649	6.5135
259000	262257	884.5	8.182	6.8049	6.488	4.1264	2.641	6.4926
259500	262770	884.0	8.173	6.7974	6.662	4.2370	2.638	6.4848
260000	263283	884.0	8.173 - 6	6.7974 - 1	6.857 + 0	4.3609 + 4	2.638 - 6	6.4848 - 1
260500	263794	884.0	8.173	6.7974	7.057	4.4884	2.638	6.4848
261000	264308	884.0	8.173	6.7974	7.264	4.6197	2.638	6.4848
261500	264821	884.0	8.173	6.7974	7.476	4.7547	2.638	6.4848
262000	265334	884.0	8.173	6.7974	7.695	4.8938	2.638	6.4848
262500	265847	884.0	8.173	6.7974	7.919	5.0369	2.638	6.4848
263000	266359	884.0	8.173	6.7974	8.151	5.1841	2.638	6.4848
263500	266872	884.0	8.173	6.7974	8.389	5.3357	2.638	6.4848
264000	267385	884.0	8.173	6.7974	8.635	5.4917	2.638	6.4848
264500	267898	884.0	8.173	6.7974	8.887	5.6523	2.638	6.4848
265000	268411	884.0	8.173 - 6	6.7974 - 1	9.147 + 0	5.8176 + 4	2.638 - 6	6.4848 - 1
265500	268924	884.0	8.173	6.7974	9.415	5.9877	2.638	6.4848
266000	269437	884.0	8.173	6.7974	9.690	6.1628	2.638	6.4848
266500	269950	884.0	8.173	6.7974	9.973	6.3430	2.638	6.4848
267000	270463	884.0	8.173	6.7974	1.026 + 1	6.5285	2.638	6.4848
267500	270976	884.0	8.173	6.7974	1.056	6.7194	2.638	6.4848
268000	271489	884.0	8.173	6.7974	1.087	6.9158	2.638	6.4848
268500	272002	884.0	8.173	6.7974	1.119	7.1180	2.638	6.4848
269000	272516	884.0	8.173	6.7974	1.152	7.3262	2.638	6.4848
269500	273029	884.0	8.173	6.7974	1.186	7.5404	2.638	6.4848

TABLE VI.—Concluded  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
230000	227491	973.96	9.6502 - 6	8.02570 - 1	1.7908 + 0	1.13896 + 4	3.1682 - 6	7.78926 - 1
230500	227980	972.64	9.8282	8.00747	1.8238	1.15994	3.1602	7.76947
231000	228469	971.31	9.8063	7.98921	1.8575	1.18138	3.1521	7.74967
231500	228958	969.98	9.5843	7.97094	1.8919	1.20326	3.1441	7.72986
232000	229447	968.65	9.5623	7.95265	1.9270	1.22561	3.1360	7.71004
232500	229936	967.32	9.5403	7.93433	1.9629	1.24843	3.1280	7.69021
233000	230425	965.99	9.5183	7.91600	1.9996	1.27175	3.1199	7.67037
233500	230914	964.65	9.4962	7.89764	2.0370	1.29555	3.1118	7.65052
234000	231403	963.31	9.4741	7.87926	2.0752	1.31987	3.1037	7.63066
234500	231892	961.97	9.4520	7.86086	2.1143	1.34471	3.0956	7.61079
235000	232381	960.63	9.4298 - 6	7.84245 - 1	2.1542 + 0	1.37009 + 4	3.0876 - 6	7.59091 - 1
235500	232870	959.29	9.4076	7.82401	2.1950	1.39602	3.0795	7.57102
236000	233359	957.94	9.3854	7.80554	2.2366	1.42250	3.0714	7.55111
236500	233848	956.60	9.3632	7.78706	2.2792	1.44957	3.0633	7.53120
237000	234337	955.25	9.3410	7.76856	2.3226	1.47722	3.0552	7.51128
237500	234825	953.90	9.3187	7.75003	2.3671	1.50547	3.0471	7.49135
238000	235314	952.55	9.2964	7.73149	2.4125	1.53435	3.0390	7.47142
238500	235803	951.19	9.2741	7.71292	2.4589	1.56385	3.0308	7.45147
239000	236292	949.84	9.2517	7.69433	2.5063	1.59401	3.0227	7.43151
239500	236780	948.48	9.2293	7.67572	2.5547	1.62484	3.0146	7.41154
240000	237269	947.12	9.2069 - 6	7.65709 - 1	2.6043 + 0	1.65634 + 4	3.0065 - 6	7.39156 - 1
240500	237758	945.76	9.1845	7.63843	2.6549	1.68855	2.9983	7.37157
241000	238246	944.39	9.1621	7.61976	2.7067	1.72147	2.9902	7.35157
241500	238735	943.03	9.1396	7.60106	2.7596	1.75513	2.9821	7.33156
242000	239224	941.66	9.1171	7.58234	2.8137	1.78954	2.9739	7.31155
242500	239712	940.29	9.0945	7.56360	2.8690	1.82472	2.9658	7.29152
243000	240201	938.92	9.0720	7.54484	2.9256	1.86070	2.9576	7.27148
243500	240689	937.55	9.0494	7.52605	2.9834	1.89749	2.9495	7.25143
244000	241178	936.17	9.0268	7.50725	3.0426	1.93511	2.9413	7.23138
244500	241666	934.80	9.0041	7.48842	3.1031	1.97359	2.9332	7.21131
245000	242155	933.42	8.9815 - 6	7.46957 - 1	3.1650 + 0	2.01294 + 4	2.9250 - 6	7.19124 - 1
245500	242643	932.04	8.9588	7.45069	3.2282	2.05319	2.9168	7.17115
246000	243132	930.7	8.936	7.4318	3.293	2.0944	2.909	7.1511
246500	243620	929.3	8.913	7.4129	3.359	2.1365	2.900	7.1310
247000	244108	927.9	8.891	7.3939	3.427	2.1796	2.892	7.1108
247500	244597	926.5	8.868	7.3750	3.496	2.2236	2.884	7.0907
248000	245085	925.1	8.845	7.3560	3.567	2.2688	2.876	7.0706
248500	245573	923.7	8.822	7.3370	3.640	2.3149	2.868	7.0504
249000	246062	922.3	8.799	7.3180	3.714	2.3621	2.860	7.0303
249500	246550	920.9	8.776	7.2989	3.790	2.4105	2.851	7.0101
250000	247038	919.5	8.753 - 6	7.2798 - 1	3.868 + 0	2.4599 + 4	2.843 - 6	6.9900 - 1
250500	247526	918.1	8.730	7.2607	3.947	2.5106	2.835	6.9698
251000	248015	916.7	8.707	7.2416	4.029	2.5624	2.827	6.9496
251500	248503	915.3	8.684	7.2225	4.112	2.6154	2.818	6.9294
252000	248991	913.9	8.661	7.2033	4.198	2.6697	2.810	6.9092
252500	249479	912.5	8.638	7.1841	4.285	2.7253	2.802	6.8890
253000	249967	911.1	8.615	7.1649	4.375	2.7822	2.794	6.8687
253500	250455	909.7	8.592	7.1457	4.466	2.8405	2.786	6.8485
254000	250943	908.2	8.569	7.1264	4.560	2.9002	2.777	6.8283
254500	251431	906.8	8.546	7.1071	4.656	2.9613	2.769	6.8080
255000	251919	905.4	8.522 - 6	7.0878 - 1	4.755 + 0	3.0239 + 4	2.761 - 6	6.7877 - 1
255500	252407	904.0	8.499	7.0685	4.855	3.0880	2.753	6.7675
256000	252895	902.6	8.476	7.0491	4.959	3.1537	2.744	6.7472
256500	253383	901.1	8.453	7.0298	5.064	3.2210	2.736	6.7269
257000	253871	899.7	8.429	7.0104	5.173	3.2899	2.728	6.7066
257500	254359	898.3	8.406	6.9909	5.284	3.3605	2.720	6.6863
258000	254847	896.8	8.383	6.9715	5.397	3.4328	2.711	6.6660
258500	255335	895.4	8.359	6.9520	5.514	3.5070	2.703	6.6456
259000	255822	894.0	8.336	6.9325	5.633	3.5829	2.695	6.6253
259500	256310	892.5	8.312	6.9130	5.756	3.6608	2.687	6.6049
260000	256798	891.1	8.289 - 6	6.8935 - 1	5.881 + 0	3.7406 + 4	2.678 - 6	6.5846 - 1
260500	257286	889.6	8.265	6.8739	6.010	3.8223	2.670	6.5642
261000	257774	888.2	8.242	6.8543	6.142	3.9062	2.662	6.5439
261500	258261	886.7	8.218	6.8347	6.277	3.9921	2.653	6.5235
262000	258749	885.3	8.194	6.8151	6.415	4.0802	2.645	6.5031
262500	259237	884.0	8.173	6.7974	6.561	4.1732	2.638	6.4848
263000	259724	884.0	8.173	6.7974	6.749	4.2921	2.638	6.4848
263500	260212	884.0	8.173	6.7974	6.941	4.4145	2.638	6.4848
264000	260699	884.0	8.173	6.7974	7.139	4.5403	2.638	6.4848
264500	261187	884.0	8.173	6.7974	7.342	4.6697	2.638	6.4848
265000	261675	884.0	8.173 - 6	6.7974 - 1	7.551 + 0	4.8028 + 4	2.638 - 6	6.4848 - 1
265500	262162	884.0	8.173	6.7974	7.767	4.9397	2.638	6.4848
266000	262650	884.0	8.173	6.7974	7.988	5.0805	2.638	6.4848
266500	263137	884.0	8.173	6.7974	8.216	5.2252	2.638	6.4848
267000	263624	884.0	8.173	6.7974	8.450	5.3741	2.638	6.4848
267500	264112	884.0	8.173	6.7974	8.691	5.5273	2.638	6.4848
268000	264599	884.0	8.173	6.7974	8.938	5.6848	2.638	6.4848
268500	265087	884.0	8.173	6.7974	9.193	5.8467	2.638	6.4848
269000	265574	884.0	8.173	6.7974	9.455	6.0133	2.638	6.4848
269500	266061	884.0	8.173	6.7974	9.724	6.1846	2.638	6.4848



TABLE VI.—Concluded  
GEOPOTENTIAL ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
H, ft	Z, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	μ, lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	η, ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
270000	273542	884.0	8.173 - 6	6.7974 - 1	1.220 + 1	7.7609 + 4	2.638 - 6	6.4848 - 1
270500	274055	884.0	8.173	6.7974	1.256	7.9878	2.638	6.4848
271000	274568	884.0	8.173	6.7974	1.293	8.2214	2.638	6.4848
271500	275082	884.0	8.173	6.7974	1.330	8.4618	2.638	6.4848
272000	275595	884.0	8.173	6.7974	1.369	8.7092	2.638	6.4848
272500	276108	884.0	8.173	6.7974	1.409	8.9638	2.638	6.4848
273000	276622	884.0	8.173	6.7974	1.451	9.2260	2.638	6.4848
273500	277135	884.0	8.173	6.7974	1.493	9.4957	2.638	6.4848
274000	277648	884.0	8.173	6.7974	1.537	9.7734	2.638	6.4848
274500	278162	884.0	8.173	6.7974	1.582	1.0059 + 5	2.638	6.4848
275000	278675	884.0	8.173 - 6	6.7974 - 1	1.628 + 1	1.0353 + 5	2.638 - 6	6.4848 - 1
275500	279189	884.0	8.173	6.7974	1.675	1.0656	2.638	6.4848
276000	279702	884.0	8.173	6.7974	1.724	1.0968	2.638	6.4848
276500	280216	884.0	8.173	6.7974	1.775	1.1288	2.638	6.4848
277000	280729	884.0	8.173	6.7974	1.827	1.1618	2.638	6.4848
277500	281243	884.0	8.173	6.7974	1.880	1.1958	2.638	6.4848
278000	281756	884.0	8.173	6.7974	1.935	1.2308	2.638	6.4848
278500	282270	884.0	8.173	6.7974	1.992	1.2668	2.638	6.4848
279000	282784	884.0	8.173	6.7974	2.050	1.3038	2.638	6.4848
279500	283297	884.0	8.173	6.7974	2.110	1.3419	2.638	6.4848
280000	283811	884.0	8.173 - 6	6.7974 - 1	2.172 + 1	1.3812 + 5	2.638 - 6	6.4848 - 1
280500	284325	884.0	8.173	6.7974	2.235	1.4215	2.638	6.4848
281000	284838	884.0	8.173	6.7974	2.300	1.4631	2.638	6.4848
281500	285352	884.0	8.173	6.7974	2.368	1.5059	2.638	6.4848
282000	285866	884.0	8.173	6.7974	2.437	1.5499	2.638	6.4848
282500	286380	884.0	8.173	6.7974	2.508	1.5952	2.638	6.4848
283000	286894	884.0	8.173	6.7974	2.582	1.6419	2.638	6.4848
283500	287408	884.0	8.173	6.7974	2.657	1.6899	2.638	6.4848
284000	287921	884.0	8.173	6.7974	2.735	1.7393	2.638	6.4848
284500	288435	884.0	8.173	6.7974	2.815	1.7902	2.638	6.4848
285000	288949	884.0	8.173 - 6	6.7974 - 1	2.897 + 1	1.8425 + 5	2.638 - 6	6.4848 - 1
285500	289463	884.0	8.173	6.7974	2.982	1.8964	2.638	6.4848
286000	289977	884.0	8.173	6.7974	3.069	1.9518	2.638	6.4848
286500	290491	884.0	8.173	6.7974	3.159	2.0089	2.638	6.4848
287000	291005	884.0	8.173	6.7974	3.251	2.0677	2.638	6.4848
287500	291519	884.0	8.173	6.7974	3.346	2.1281	2.638	6.4848
288000	292033	884.0	8.173	6.7974	3.444	2.1903	2.638	6.4848
288500	292548	884.0	8.173	6.7974	3.545	2.2544	2.638	6.4848
289000	293062	884.0	8.173	6.7974	3.648	2.3203	2.638	6.4848
289500	293576	884.0	8.173	6.7974	3.755	2.3882	2.638	6.4848
290000	294090	884.0	8.173 - 6	6.7974 - 1	3.865 + 1	2.4580 + 5	2.638 - 6	6.4848 - 1
290500	294604	884.0	8.173	6.7974	3.978	2.5299	2.638	6.4848
291000	295119	884.0	8.173	6.7974	4.094	2.6038	2.638	6.4848
291500	295633	884.8	8.186	6.8082	4.228	2.6890	2.642	6.4959
292000	296147	885.9	8.205	6.8236	4.372	2.7809	2.649	6.5120
292500	296661	887.1	8.223	6.8391	4.521	2.8756	2.655	6.5280
293000	297176	888.2	8.242	6.8545	4.675	2.9734	2.662	6.5441
293500	297690	889.4	8.260	6.8699	4.833	3.0741	2.668	6.5601
294000	298204	890.5	8.279	6.8853	4.997	3.1781	2.675	6.5761
294500	298719	891.7	8.297	6.9007	5.165	3.2852	2.681	6.5921
295000	299233	892.8	8.316 - 6	6.9161 - 1	5.339 + 1	3.3957 + 5	2.688 - 6	6.6082 - 1
295500	299748	893.9	8.334	6.9314	5.518	3.5095	2.694	6.6242
296000	300262	895.1	8.353	6.9468	5.703	3.6269	2.701	6.6401
296500	300777	896.2	8.371	6.9621	5.893	3.7479	2.707	6.6561
297000	301291	897.4	8.390	6.9774	6.089	3.8726	2.714	6.6721
297500	301806	898.5	8.408	6.9926	6.291	4.0011	2.720	6.6881
298000	302321	899.6	8.426	7.0079	6.499	4.1335	2.727	6.7040
298500	302835	900.7	8.445	7.0231	6.714	4.2700	2.733	6.7200
299000	303350	901.9	8.463	7.0383	6.935	4.4106	2.740	6.7359
299500	303864	903.0	8.481	7.0535	7.163	4.5554	2.746	6.7518
300000	304379	904.1	8.499 - 6	7.0687 - 1	7.397 + 1	4.7046 + 5	2.753 - 6	6.7677 - 1

TABLE VI.—Continued  
GEOMETRIC ALTITUDE, ENGLISH UNITS

Altitude		Sound speed	Coefficient of viscosity		Kinematic viscosity		Thermal conductivity	
Z, ft	H, ft	C <sub>s</sub> , ft sec <sup>-1</sup>	$\mu$ , lb ft <sup>-1</sup> sec <sup>-1</sup>	$\frac{\mu}{\mu_0}$	$\eta$ , ft <sup>2</sup> sec <sup>-1</sup>	$\frac{\eta}{\eta_0}$	k, BTU ft <sup>-1</sup> sec <sup>-1</sup> (°R) <sup>-1</sup>	$\frac{k}{k_0}$
270000	266549	884.0	8.173 - 6	6.7974 - 1	1.000 + 1	6.3608 + 4	2.638 - 6	6.4848 - 1
270500	267036	884.0	8.173	6.7974	1.029	6.5420	2.638	6.4848
271000	267523	884.0	8.173	6.7974	1.058	6.7283	2.638	6.4848
271500	268010	884.0	8.173	6.7974	1.088	6.9200	2.638	6.4848
272000	268498	884.0	8.173	6.7974	1.119	7.1171	2.638	6.4848
272500	268985	884.0	8.173	6.7974	1.151	7.3198	2.638	6.4848
273000	269472	884.0	8.173	6.7974	1.184	7.5282	2.638	6.4848
273500	269959	884.0	8.173	6.7974	1.217	7.7426	2.638	6.4848
274000	270446	884.0	8.173	6.7974	1.252	7.9631	2.638	6.4848
274500	270933	884.0	8.173	6.7974	1.288	8.1899	2.638	6.4848
275000	271420	884.0	8.173 - 6	6.7974 - 1	1.324 + 1	8.4231 + 4	2.638 - 6	6.4848 - 1
275500	271908	884.0	8.173	6.7974	1.362	8.6629	2.638	6.4848
276000	272395	884.0	8.173	6.7974	1.401	8.9095	2.638	6.4848
276500	272882	884.0	8.173	6.7974	1.441	9.1632	2.638	6.4848
277000	273369	884.0	8.173	6.7974	1.482	9.4240	2.638	6.4848
277500	273856	884.0	8.173	6.7974	1.524	9.6923	2.638	6.4848
278000	274342	884.0	8.173	6.7974	1.567	9.9682	2.638	6.4848
278500	274829	884.0	8.173	6.7974	1.612	1.0252 + 5	2.638	6.4848
279000	275316	884.0	8.173	6.7974	1.658	1.0544	2.638	6.4848
279500	275803	884.0	8.173	6.7974	1.705	1.0844	2.638	6.4848
280000	276290	884.0	8.173 - 6	6.7974 - 1	1.754 + 1	1.1152 + 5	2.638 - 6	6.4848 - 1
280500	276777	884.0	8.173	6.7974	1.803	1.1470	2.638	6.4848
281000	277264	884.0	8.173	6.7974	1.855	1.1796	2.638	6.4848
281500	277750	884.0	8.173	6.7974	1.908	1.2132	2.638	6.4848
282000	278237	884.0	8.173	6.7974	1.962	1.2477	2.638	6.4848
282500	278724	884.0	8.173	6.7974	2.018	1.2832	2.638	6.4848
283000	279211	884.0	8.173	6.7974	2.075	1.3197	2.638	6.4848
283500	279697	884.0	8.173	6.7974	2.134	1.3573	2.638	6.4848
284000	280184	884.0	8.173	6.7974	2.195	1.3959	2.638	6.4848
284500	280671	884.0	8.173	6.7974	2.257	1.4356	2.638	6.4848
285000	281157	884.0	8.173 - 6	6.7974 - 1	2.321 + 1	1.4764 + 5	2.638 - 6	6.4848 - 1
285500	281644	884.0	8.173	6.7974	2.387	1.5184	2.638	6.4848
286000	282130	884.0	8.173	6.7974	2.455	1.5616	2.638	6.4848
286500	282617	884.0	8.173	6.7974	2.525	1.6060	2.638	6.4848
287000	283103	884.0	8.173	6.7974	2.597	1.6517	2.638	6.4848
287500	283590	884.0	8.173	6.7974	2.671	1.6987	2.638	6.4848
288000	284076	884.0	8.173	6.7974	2.747	1.7470	2.638	6.4848
288500	284563	884.0	8.173	6.7974	2.825	1.7967	2.638	6.4848
289000	285049	884.0	8.173	6.7974	2.905	1.8478	2.638	6.4848
289500	285536	884.0	8.173	6.7974	2.988	1.9003	2.638	6.4848
290000	286022	884.0	8.173 - 6	6.7974 - 1	3.073 + 1	1.9543 + 5	2.638 - 6	6.4848 - 1
290500	286509	884.0	8.173	6.7974	3.160	2.0099	2.638	6.4848
291000	286995	884.0	8.173	6.7974	3.250	2.0670	2.638	6.4848
291500	287481	884.0	8.173	6.7974	3.342	2.1258	2.638	6.4848
292000	287967	884.0	8.173	6.7974	3.437	2.1862	2.638	6.4848
292500	288454	884.0	8.173	6.7974	3.535	2.2484	2.638	6.4848
293000	288940	884.0	8.173	6.7974	3.636	2.3123	2.638	6.4848
293500	289426	884.0	8.173	6.7974	3.739	2.3780	2.638	6.4848
294000	289912	884.0	8.173	6.7974	3.845	2.4456	2.638	6.4848
294500	290399	884.0	8.173	6.7974	3.955	2.5151	2.638	6.4848
295000	290885	884.0	8.173 - 6	6.7974 - 1	4.067 + 1	2.5866 + 5	2.638 - 6	6.4848 - 1
295500	291371	884.5	8.181	6.8042	4.191	2.6657	2.641	6.4918
296000	291857	885.6	8.199	6.8192	4.331	2.7543	2.647	6.5074
296500	292343	886.7	8.218	6.8342	4.474	2.8456	2.653	6.5230
297000	292829	887.8	8.236	6.8492	4.622	2.9396	2.660	6.5386
297500	293315	889.0	8.254	6.8642	4.774	3.0365	2.666	6.5542
298000	293801	890.1	8.272	6.8792	4.931	3.1364	2.672	6.5698
298500	294287	891.2	8.290	6.8942	5.093	3.2392	2.679	6.5853
299000	294773	892.3	8.308	6.9091	5.260	3.3451	2.685	6.6009
299500	295259	893.4	8.326	6.9240	5.431	3.4543	2.691	6.6164
300000	295745	894.5	8.343 - 6	6.9389 - 1	5.608 + 1	3.5666 + 5	2.698 - 6	6.6320 - 1

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Table VII  
GEOPOTENTIAL ALTITUDE IN METERS AS A FUNCTION OF PRESSURE IN  
MILLIBARS

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
8.60									32000	31992
8.70	31985	31977	31969	31962	31954	31946	31939	31931	31923	31916
8.80	31908	31901	31893	31885	31878	31870	31863	31855	31848	31840
8.90	31833	31825	31818	31810	31803	31795	31788	31780	31773	31765
9.00	31758	31751	31743	31736	31728	31721	31714	31706	31699	31691
9.10	31684	31677	31669	31662	31655	31647	31640	31633	31626	31618
9.20	31611	31604	31597	31589	31582	31575	31568	31560	31553	31546
9.30	31539	31532	31524	31517	31510	31503	31496	31489	31482	31474
9.40	31467	31460	31453	31446	31439	31432	31425	31418	31411	31404
9.50	31397	31390	31383	31376	31369	31362	31355	31348	31341	31334
9.60	31327	31320	31313	31306	31299	31292	31285	31278	31271	31265
9.70	31258	31251	31244	31237	31230	31223	31217	31210	31203	31196
9.80	31189	31182	31176	31169	31162	31155	31149	31142	31135	31128
9.90	31122	31115	31108	31101	31095	31088	31081	31075	31068	31061

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
10.00	31055	31048	31041	31035	31028	31021	31015	31008	31002	30995
10.10	30988	30982	30975	30969	30962	30955	30949	30942	30936	30929
10.20	30923	30916	30910	30903	30897	30890	30884	30877	30871	30864
10.30	30858	30851	30845	30838	30832	30825	30819	30813	30806	30800
10.40	30793	30787	30781	30774	30768	30761	30755	30749	30742	30736
10.50	30730	30723	30717	30711	30704	30698	30692	30685	30679	30673
10.60	30667	30660	30654	30648	30642	30635	30629	30623	30617	30610
10.70	30604	30598	30592	30585	30579	30573	30567	30561	30555	30548
10.80	30542	30536	30530	30524	30518	30512	30505	30499	30493	30487
10.90	30481	30475	30469	30463	30457	30451	30444	30438	30432	30426
11.00	30420	30414	30408	30402	30396	30390	30384	30378	30372	30366
11.10	30360	30354	30348	30342	30336	30330	30324	30318	30312	30306
11.20	30300	30295	30289	30283	30277	30271	30265	30259	30253	30247
11.30	30241	30236	30230	30224	30218	30212	30206	30200	30195	30189
11.40	30183	30177	30171	30165	30160	30154	30148	30142	30137	30131
11.50	30125	30119	30113	30108	30102	30096	30090	30085	30079	30073
11.60	30067	30062	30056	30050	30045	30039	30033	30028	30022	30016
11.70	30011	30005	29999	29993	29988	29982	29977	29971	29965	29960
11.80	29954	29948	29943	29937	29932	29926	29920	29915	29909	29904
11.90	29898	29893	29887	29881	29876	29870	29865	29859	29854	29848
12.00	29843	29837	29832	29826	29821	29815	29810	29804	29799	29793
12.10	29788	29782	29777	29771	29766	29760	29755	29749	29744	29739
12.20	29733	29728	29722	29717	29711	29706	29701	29695	29690	29684
12.30	29679	29674	29668	29663	29657	29652	29647	29641	29636	29631
12.40	29625	29620	29615	29609	29604	29599	29593	29588	29583	29577
12.50	29572	29567	29562	29556	29551	29546	29540	29535	29530	29525
12.60	29519	29514	29509	29504	29498	29493	29488	29483	29477	29472
12.70	29467	29462	29457	29451	29446	29441	29436	29431	29426	29420
12.80	29415	29410	29405	29400	29395	29389	29384	29379	29374	29369
12.90	29364	29359	29353	29348	29343	29338	29333	29328	29323	29318
13.00	29313	29308	29302	29297	29292	29287	29282	29277	29272	29267
13.10	29262	29257	29252	29247	29242	29237	29232	29227	29222	29217
13.20	29212	29207	29202	29197	29192	29187	29182	29177	29172	29167
13.30	29162	29157	29152	29147	29142	29137	29132	29127	29122	29117
13.40	29112	29107	29102	29097	29093	29088	29083	29078	29073	29068
13.50	29063	29058	29053	29048	29044	29039	29034	29029	29024	29019
13.60	29014	29009	29005	29000	28995	28990	28985	28980	28976	28971
13.70	28966	28961	28956	28952	28947	28942	28937	28932	28928	28923
13.80	28918	28913	28908	28904	28899	28894	28889	28885	28880	28875
13.90	28870	28866	28861	28856	28851	28847	28842	28837	28832	28828
14.00	28823	28818	28814	28809	28804	28799	28795	28790	28785	28781
14.10	28776	28771	28767	28762	28757	28753	28748	28743	28739	28734
14.20	28729	28725	28720	28715	28711	28706	28702	28697	28692	28688
14.30	28683	28678	28674	28669	28665	28660	28655	28651	28646	28642
14.40	28637	28633	28628	28623	28619	28614	28610	28605	28601	28596
14.50	28591	28587	28582	28578	28573	28569	28564	28560	28555	28551
14.60	28546	28542	28537	28533	28528	28524	28519	28515	28510	28506
14.70	28501	28497	28492	28488	28483	28479	28474	28470	28465	28461
14.80	28456	28452	28448	28443	28439	28434	28430	28425	28421	28417
14.90	28412	28408	28403	28399	28394	28390	28386	28381	28377	28372
15.00	28368	28364	28359	28355	28351	28346	28342	28337	28333	28329
15.10	28324	28320	28316	28311	28307	28303	28298	28294	28290	28285
15.20	28281	28277	28272	28268	28264	28259	28255	28251	28246	28242
15.30	28238	28233	28229	28225	28220	28216	28212	28208	28203	28199
15.40	28195	28191	28186	28182	28178	28173	28169	28165	28161	28156
15.50	28152	28148	28144	28139	28135	28131	28127	28123	28118	28114
15.60	28110	28106	28101	28097	28093	28089	28085	28080	28076	28072
15.70	28068	28064	28059	28055	28051	28047	28043	28039	28034	28030
15.80	28026	28022	28018	28014	28009	28005	28001	27997	27993	27989
15.90	27985	27980	27976	27972	27968	27964	27960	27956	27952	27947
16.00	27943	27939	27935	27931	27927	27923	27919	27915	27911	27907
16.10	27902	27898	27894	27890	27886	27882	27878	27874	27870	27866
16.20	27862	27858	27854	27850	27846	27841	27837	27833	27829	27825
16.30	27821	27817	27813	27809	27805	27801	27797	27793	27789	27785
16.40	27781	27777	27773	27769	27765	27761	27757	27753	27749	27745
16.50	27741	27737	27733	27729	27725	27721	27717	27713	27709	27705
16.60	27701	27698	27694	27690	27686	27682	27678	27674	27670	27666
16.70	27662	27658	27654	27650	27646	27642	27639	27635	27631	27627
16.80	27623	27619	27615	27611	27607	27603	27599	27596	27592	27588
16.90	27584	27580	27576	27572	27568	27565	27561	27557	27553	27549
17.00	27545	27541	27537	27534	27530	27526	27522	27518	27514	27511
17.10	27507	27503	27499	27495	27491	27488	27484	27480	27476	27472
17.20	27468	27465	27461	27457	27453	27449	27446	27442	27438	27434
17.30	27430	27427	27423	27419	27415	27411	27408	27404	27400	27396
17.40	27393	27389	27385	27381	27378	27374	27370	27366	27363	27359
17.50	27355	27351	27348	27344	27340	27336	27333	27329	27325	27321
17.60	27318	27314	27310	27307	27303	27299	27295	27292	27288	27284
17.70	27281	27277	27273	27269	27266	27262	27258	27255	27251	27247
17.80	27244	27240	27236	27233	27229	27225	27222	27218	27214	27211
17.90	27207	27203	27200	27196	27192	27189	27185	27181	27178	27174
18.00	27170	27167	27163	27159	27156	27152	27149	27145	27141	27138
18.10	27134	27130	27127	27123	27120	27116	27112	27109	27105	27102
18.20	27098	27094	27091	27087	27084	27080	27076	27073	27069	27066
18.30	27062	27059	27055	27051	27048	27044	27041	27037	27034	27030
18.40	27026	27023	27019	27016	27012	27009	27005	27002	26998	26995
18.50	26991	26987	26984	26980	26977	26973	26970	26966	26963	26959
18.60	26956	26952	26949	26945	26942	26938	26935	26931	26928	26924
18.70	26921	26917	26914	26910	26907	26903	26900	26896	26893	26889
18.80	26886	26882	26879	26875	26872	26868	26865	26861	26858	26854
18.90	26851	26848	26844	26841	26837	26834	26830	26827	26823	26820
19.00	26816	26813	26810	26806	26803	26799	26796	26792	26789	26786
19.10	26782	26779	26775	26772	26768	26765	26762	26758	26755	26751
19.20	26748	26745	26741	26738	26734	26731	26728	26724	26721	26717
19.30	26714	26711	26707	26704	26700	26697	26694	26690	26687	26684
19.40	26680	26677	26673	26670	26667	26663	26660	26657	26653	26650
19.50	26647	26643	26640	26637	26633	26630	26627	26623	26620	26617
19.60	26613	26610	26607	26603	26600	26597	26593	26590	26587	26583
19.70	26580	26577	26573	26570	26567	26563	26560	26557	26553	26550
19.80	26547	26544	26540	26537	26534	26530	26527	26524	26521	26517
19.90	26514	26511	26507	26504	26501	26498	26494	26491	26488	26484



GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
20.0	26481	26449	26416	26384	26352	26320	26288	26257	26225	26194
21.0	26163	26132	26101	26070	26040	26009	25979	25949	25919	25889
22.0	25860	25830	25801	25771	25742	25713	25684	25656	25627	25599
23.0	25570	25542	25514	25486	25458	25430	25403	25375	25348	25321
24.0	25294	25267	25240	25213	25186	25160	25133	25107	25081	25055
25.0	25029	25003	24977	24951	24926	24900	24875	24849	24824	24799
26.0	24774	24749	24725	24700	24675	24651	24626	24602	24578	24554
27.0	24530	24506	24482	24458	24435	24411	24387	24364	24341	24318
28.0	24294	24271	24248	24225	24203	24180	24157	24135	24112	24090
29.0	24068	24045	24023	24001	23979	23957	23935	23914	23892	23870
30.0	23849	23827	23806	23784	23763	23742	23721	23700	23679	23658
31.0	23637	23616	23596	23575	23554	23534	23514	23493	23473	23453
32.0	23432	23412	23392	23372	23352	23333	23313	23293	23273	23254
33.0	23234	23215	23195	23176	23157	23138	23118	23099	23080	23061
34.0	23042	23023	23005	22986	22967	22948	22930	22911	22893	22874
35.0	22856	22838	22819	22801	22783	22765	22747	22729	22711	22693
36.0	22675	22657	22639	22622	22604	22586	22569	22551	22534	22517
37.0	22499	22482	22465	22447	22430	22413	22396	22379	22362	22345
38.0	22328	22311	22295	22278	22261	22244	22228	22211	22195	22178
39.0	22162	22145	22129	22113	22096	22080	22064	22048	22032	22016
40.0	22000	21984	21968	21952	21936	21920	21904	21889	21873	21857
41.0	21842	21826	21811	21795	21780	21764	21749	21733	21718	21703
42.0	21688	21672	21657	21642	21627	21612	21597	21582	21567	21552
43.0	21537	21522	21508	21493	21478	21463	21449	21434	21420	21405
44.0	21390	21376	21362	21347	21333	21318	21304	21290	21276	21261
45.0	21247	21233	21219	21205	21191	21177	21163	21149	21135	21121
46.0	21107	21093	21079	21066	21052	21038	21024	21011	20997	20984
47.0	20970	20956	20943	20929	20916	20903	20889	20876	20862	20849
48.0	20836	20823	20809	20796	20783	20770	20757	20744	20731	20718
49.0	20705	20692	20679	20666	20653	20640	20627	20614	20602	20589
50.0	20576	20563	20551	20538	20525	20513	20500	20488	20475	20463
51.0	20450	20438	20425	20413	20401	20388	20376	20364	20351	20339
52.0	20327	20315	20303	20290	20278	20266	20254	20242	20230	20218
53.0	20206	20194	20182	20170	20158	20146	20135	20123	20111	20099
54.0	20087	20076	20064	20052	20041	20029	20017	20006	19994	19982
55.0	19971	19959	19948	19936	19925	19914	19902	19891	19879	19868
56.0	19857	19845	19834	19823	19812	19800	19789	19778	19767	19756
57.0	19744	19733	19722	19711	19700	19689	19678	19667	19656	19645
58.0	19634	19623	19612	19601	19591	19580	19569	19558	19547	19537
59.0	19526	19515	19504	19494	19483	19472	19462	19451	19440	19430
60.0	19419	19409	19398	19388	19377	19367	19356	19346	19335	19325
61.0	19314	19304	19294	19283	19273	19262	19252	19242	19232	19221
62.0	19211	19201	19191	19181	19170	19160	19150	19140	19130	19120
63.0	19110	19100	19090	19080	19070	19060	19050	19040	19030	19020
64.0	19010	19000	18990	18980	18970	18961	18951	18941	18931	18921
65.0	18912	18902	18892	18882	18873	18863	18853	18844	18834	18824
66.0	18815	18805	18796	18786	18776	18767	18757	18748	18738	18729
67.0	18719	18710	18700	18691	18682	18672	18663	18653	18644	18635
68.0	18625	18616	18607	18598	18588	18579	18570	18560	18551	18542
69.0	18533	18524	18514	18505	18496	18487	18478	18469	18460	18451
70.0	18442	18433	18424	18414	18405	18396	18387	18378	18370	18361
71.0	18352	18343	18334	18325	18316	18307	18298	18289	18281	18272
72.0	18263	18254	18245	18237	18228	18219	18210	18202	18193	18184
73.0	18175	18167	18158	18149	18141	18132	18124	18115	18106	18098
74.0	18089	18081	18072	18064	18055	18046	18038	18029	18021	18013
75.0	18004	17996	17987	17979	17970	17962	17954	17945	17937	17928
76.0	17920	17912	17903	17895	17887	17878	17870	17862	17854	17845
77.0	17837	17829	17821	17813	17804	17796	17788	17780	17772	17763
78.0	17755	17747	17739	17731	17723	17715	17707	17699	17691	17683
79.0	17675	17667	17659	17651	17643	17635	17627	17619	17611	17603
80.0	17595	17587	17579	17571	17563	17555	17547	17540	17532	17524
81.0	17516	17508	17500	17493	17485	17477	17469	17461	17454	17446
82.0	17438	17430	17423	17415	17407	17400	17392	17384	17377	17369
83.0	17361	17354	17346	17338	17331	17323	17316	17308	17301	17293
84.0	17285	17278	17270	17263	17255	17248	17240	17233	17225	17218
85.0	17210	17203	17195	17188	17181	17173	17166	17158	17151	17144
86.0	17136	17129	17121	17114	17107	17099	17092	17085	17077	17070
87.0	17063	17056	17048	17041	17034	17027	17019	17012	17005	16998
88.0	16990	16983	16976	16969	16962	16954	16947	16940	16933	16926
89.0	16919	16912	16904	16897	16890	16883	16876	16869	16862	16855
90.0	16848	16841	16834	16827	16820	16813	16806	16799	16792	16785
91.0	16778	16771	16764	16757	16750	16743	16736	16729	16722	16715
92.0	16708	16702	16695	16688	16681	16674	16667	16660	16654	16647
93.0	16640	16633	16626	16620	16613	16606	16599	16592	16586	16579
94.0	16572	16565	16559	16552	16545	16538	16532	16525	16518	16512
95.0	16505	16498	16492	16485	16478	16472	16465	16458	16452	16445
96.0	16439	16432	16425	16419	16412	16406	16399	16393	16386	16379
97.0	16373	16366	16360	16353	16347	16340	16334	16327	16321	16314
98.0	16308	16301	16295	16288	16282	16276	16269	16263	16256	16250
99.0	16243	16237	16231	16224	16218	16211	16205	16199	16192	16186
100.0	16180	16173	16167	16161	16154	16148	16142	16135	16129	16123
101.0	16117	16110	16104	16098	16092	16085	16079	16073	16067	16060
102.0	16054	16048	16042	16036	16029	16023	16017	16011	16005	15998
103.0	15992	15986	15980	15974	15968	15962	15956	15950	15944	15937
104.0	15931	15925	15919	15913	15907	15901	15895	15889	15882	15876
105.0	15870	15864	15858	15852	15846	15840	15834	15828	15822	15816
106.0	15810	15804	15798	15792	15786	15780	15774	15768	15763	15757
107.0	15751	15745	15739	15733	15727	15721	15715	15709	15703	15698
108.0	15692	15686	15680	15674	15668	15662	15657	15651	15645	15639
109.0	15633	15627	15622	15616	15610	15604	15598	15593	15587	15581
110.0	15575	15569	15564	15558	15552	15547	15541	15535	15529	15524
111.0	15518	15512	15506	15501	15495	15489	15484	15478	15472	15467
112.0	15461	15455	15450	15444	15438	15433	15427	15422	15416	15410
113.0	15405	15399	15393	15388	15382	15377	15371	15365	15360	15354
114.0	15349	15343	15338	15332	15327	15321	15315	15310	15304	15299
115.0	15293	15288	15282	15277	15271	15266	15260	15255	15249	15244
116.0	15238	15233	15228	15222	15217	15211	15206	15200	15195	15189
117.0	15184	15179	15173	15168	15162	15157	15152	15146	15141	15135
118.0	15130	15125	15119	15114	15109	15103	15098	15093	15087	15082
119.0	15077	15071	15066	15061	15055	15050	15045	15039	15034	15029

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
120.0	15023	15018	15013	15008	15002	14997	14992	14987	14981	14976
121.0	14971	14966	14960	14955	14950	14945	14940	14934	14929	14924
122.0	14919	14913	14908	14903	14898	14893	14888	14882	14877	14872
123.0	14867	14862	14857	14851	14846	14841	14836	14831	14826	14821
124.0	14816	14810	14805	14800	14795	14790	14785	14780	14775	14770
125.0	14765	14760	14754	14749	14744	14739	14734	14729	14724	14719
126.0	14714	14709	14704	14699	14694	14689	14684	14679	14674	14669
127.0	14664	14659	14654	14649	14644	14639	14634	14629	14624	14619
128.0	14614	14609	14604	14599	14594	14589	14585	14580	14575	14570
129.0	14565	14560	14555	14550	14545	14540	14535	14530	14525	14521
130.0	14516	14511	14506	14501	14496	14492	14487	14482	14477	14472
131.0	14467	14462	14458	14453	14448	14443	14438	14434	14429	14424
132.0	14419	14414	14409	14405	14400	14395	14390	14386	14381	14376
133.0	14371	14366	14362	14357	14352	14347	14343	14338	14333	14328
134.0	14324	14319	14314	14310	14305	14300	14295	14291	14286	14281
135.0	14277	14272	14267	14262	14258	14253	14248	14244	14239	14234
136.0	14230	14225	14220	14216	14211	14206	14202	14197	14193	14188
137.0	14183	14179	14174	14169	14165	14160	14156	14151	14146	14142
138.0	14137	14133	14128	14123	14119	14114	14110	14105	14101	14096
139.0	14091	14087	14082	14078	14073	14069	14064	14060	14055	14050
140.0	14046	14041	14037	14032	14028	14023	14019	14014	14010	14005
141.0	14001	13996	13992	13987	13983	13978	13974	13969	13965	13960
142.0	13956	13952	13947	13943	13938	13934	13929	13925	13920	13916
143.0	13911	13907	13903	13898	13894	13889	13885	13881	13876	13872
144.0	13867	13863	13858	13854	13850	13845	13841	13837	13832	13828
145.0	13823	13819	13815	13810	13806	13802	13797	13793	13789	13784
146.0	13780	13775	13771	13767	13762	13758	13754	13749	13745	13741
147.0	13737	13732	13728	13724	13719	13715	13711	13706	13702	13698
148.0	13694	13689	13685	13681	13676	13672	13668	13664	13659	13655
149.0	13651	13647	13642	13638	13634	13630	13625	13621	13617	13613
150.0	13608	13604	13600	13596	13592	13587	13583	13579	13575	13570
151.0	13566	13562	13558	13554	13549	13545	13541	13537	13533	13529
152.0	13524	13520	13516	13512	13508	13504	13500	13495	13491	13487
153.0	13483	13479	13475	13470	13466	13462	13458	13454	13450	13446
154.0	13442	13437	13433	13429	13425	13421	13417	13413	13409	13405
155.0	13400	13396	13392	13388	13384	13380	13376	13372	13368	13364
156.0	13360	13356	13352	13348	13343	13339	13335	13331	13327	13323
157.0	13319	13315	13311	13307	13303	13299	13295	13291	13287	13283
158.0	13279	13275	13271	13267	13263	13259	13255	13251	13247	13243
159.0	13239	13235	13231	13227	13223	13219	13215	13211	13207	13203
160.0	13199	13195	13191	13187	13183	13179	13175	13171	13167	13164
161.0	13160	13156	13152	13148	13144	13140	13136	13132	13128	13124
162.0	13120	13116	13113	13109	13105	13101	13097	13093	13089	13085
163.0	13081	13077	13074	13070	13066	13062	13058	13054	13050	13046
164.0	13043	13039	13035	13031	13027	13023	13019	13015	13012	13008
165.0	13004	13000	12996	12992	12988	12985	12981	12977	12973	12969
166.0	12966	12962	12958	12954	12950	12947	12943	12939	12935	12931
167.0	12928	12924	12920	12916	12912	12909	12905	12901	12897	12893
168.0	12890	12886	12882	12878	12875	12871	12867	12863	12860	12856
169.0	12852	12848	12845	12841	12837	12833	12830	12826	12822	12818
170.0	12815	12811	12807	12803	12800	12796	12792	12789	12785	12781
171.0	12777	12774	12770	12766	12763	12759	12755	12752	12748	12744
172.0	12740	12737	12733	12729	12726	12722	12718	12715	12711	12707
173.0	12704	12700	12696	12693	12689	12685	12682	12678	12674	12671
174.0	12667	12664	12660	12656	12653	12649	12645	12642	12638	12634
175.0	12631	12627	12624	12620	12616	12613	12609	12606	12602	12598
176.0	12595	12591	12588	12584	12581	12577	12573	12570	12566	12562
177.0	12559	12555	12552	12548	12544	12541	12537	12534	12530	12527
178.0	12523	12519	12516	12512	12509	12505	12502	12498	12495	12491
179.0	12488	12484	12480	12477	12473	12470	12466	12463	12459	12456
180.0	12452	12449	12445	12442	12438	12435	12431	12428	12424	12421
181.0	12417	12414	12410	12407	12403	12400	12396	12393	12389	12386
182.0	12382	12379	12375	12372	12368	12365	12361	12358	12354	12351
183.0	12347	12344	12340	12337	12334	12330	12327	12323	12320	12316
184.0	12313	12309	12306	12302	12299	12296	12292	12289	12285	12282
185.0	12278	12275	12272	12268	12265	12261	12258	12254	12251	12248
186.0	12244	12241	12237	12234	12231	12227	12224	12220	12217	12214
187.0	12210	12207	12203	12200	12197	12193	12190	12187	12183	12180
188.0	12176	12173	12170	12166	12163	12160	12156	12153	12149	12146
189.0	12143	12139	12136	12133	12129	12126	12123	12119	12116	12113
190.0	12109	12106	12103	12099	12096	12093	12089	12086	12083	12079
191.0	12076	12073	12069	12066	12063	12059	12056	12053	12050	12046
192.0	12043	12040	12036	12033	12030	12026	12023	12020	12017	12013
193.0	12010	12007	12003	12000	11997	11994	11990	11987	11984	11980
194.0	11977	11974	11971	11967	11964	11961	11958	11954	11951	11948
195.0	11945	11941	11938	11935	11932	11928	11925	11922	11919	11915
196.0	11912	11909	11906	11902	11899	11896	11893	11890	11886	11883
197.0	11880	11877	11873	11870	11867	11864	11861	11857	11854	11851
198.0	11848	11845	11841	11838	11835	11832	11829	11825	11822	11819
199.0	11816	11813	11809	11806	11803	11800	11797	11794	11790	11787
200.0	11784	11781	11778	11775	11771	11768	11765	11762	11759	11756
201.0	11752	11749	11746	11743	11740	11737	11734	11730	11727	11724
202.0	11721	11718	11715	11712	11708	11705	11702	11699	11696	11693
203.0	11690	11686	11683	11680	11677	11674	11671	11668	11665	11662
204.0	11658	11655	11652	11649	11646	11643	11640	11637	11634	11631
205.0	11627	11624	11621	11618	11615	11612	11609	11606	11603	11600
206.0	11597	11594	11590	11587	11584	11581	11578	11575	11572	11569
207.0	11566	11563	11560	11557	11554	11551	11548	11545	11541	11538
208.0	11535	11532	11529	11526	11523	11520	11517	11514	11511	11508
209.0	11505	11502	11499	11496	11493	11490	11487	11484	11481	11478
210.0	11475	11472	11469	11466	11463	11460	11457	11454	11451	11448
211.0	11445	11441	11438	11435	11432	11429	11426	11423	11420	11418
212.0	11415	11412	11409	11406	11403	11400	11397	11394	11391	11388
213.0	11385	11382	11379	11376	11373	11370	11367	11364	11361	11358
214.0	11355	11352	11349	11346	11343	11340	11337	11334	11331	11328
215.0	11325	11322	11319	11317	11314	11311	11308	11305	11302	11299
216.0	11296	11293	11290	11287	11284	11281	11278	11275	11273	11270
217.0	11267	11264	11261	11258	11255	11252	11249	11246	11243	11240
218.0	11238	11235	11232	11229	11226	11223	11220	11217	11214	11211
219.0	11209	11206	11203	11200	11197	11194	11191	11188	11185	11182

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
220.0	11180	11177	11174	11171	11168	11165	11162	11159	11157	11154
221.0	11151	11148	11145	11142	11139	11137	11134	11131	11128	11125
222.0	11122	11119	11117	11114	11111	11108	11105	11102	11099	11097
223.0	11094	11091	11088	11085	11082	11080	11077	11074	11071	11068
224.0	11065	11063	11060	11057	11054	11051	11048	11046	11043	11040
225.0	11037	11034	11031	11028	11026	11023	11020	11017	11015	11012
226.0	11009	11006	11003	11001	10998	10995	10992	10989	10987	10984
227.0	10981	10978	10975	10973	10970	10967	10964	10961	10959	10956
228.0	10953	10950	10948	10945	10942	10939	10936	10934	10931	10928
229.0	10925	10922	10920	10917	10914	10911	10909	10906	10903	10900
230.0	10898	10895	10892	10889	10887	10884	10881	10878	10875	10873
231.0	10870	10867	10864	10862	10859	10856	10853	10851	10848	10845
232.0	10842	10840	10837	10834	10831	10829	10826	10823	10821	10818
233.0	10815	10812	10810	10807	10804	10801	10799	10796	10793	10790
234.0	10788	10785	10782	10780	10777	10774	10771	10769	10766	10763
235.0	10760	10758	10755	10752	10750	10747	10744	10741	10739	10736
236.0	10733	10731	10728	10725	10723	10720	10717	10714	10712	10709
237.0	10706	10704	10701	10698	10696	10693	10690	10687	10685	10682
238.0	10679	10677	10674	10671	10669	10666	10663	10661	10658	10655
239.0	10653	10650	10647	10644	10642	10639	10636	10634	10631	10628
240.0	10626	10623	10620	10618	10615	10612	10610	10607	10604	10602
241.0	10599	10596	10594	10591	10588	10586	10583	10580	10578	10575
242.0	10572	10570	10567	10565	10562	10559	10557	10554	10551	10549
243.0	10546	10543	10541	10538	10535	10533	10530	10527	10525	10522
244.0	10520	10517	10514	10512	10509	10506	10504	10501	10499	10496
245.0	10493	10491	10488	10485	10483	10480	10477	10475	10472	10470
246.0	10467	10464	10462	10459	10457	10454	10451	10449	10446	10443
247.0	10441	10438	10436	10433	10430	10428	10425	10423	10420	10417
248.0	10415	10412	10410	10407	10404	10402	10399	10397	10394	10391
249.0	10389	10386	10384	10381	10378	10376	10373	10371	10368	10366
250.0	10363	10360	10358	10355	10353	10350	10347	10345	10342	10340
251.0	10337	10335	10332	10329	10327	10324	10322	10319	10317	10314
252.0	10311	10309	10306	10304	10301	10299	10296	10293	10291	10288
253.0	10286	10283	10281	10278	10276	10273	10270	10268	10265	10263
254.0	10260	10258	10255	10253	10250	10247	10245	10242	10240	10237
255.0	10235	10232	10230	10227	10225	10222	10219	10217	10214	10212
256.0	10209	10207	10204	10202	10199	10197	10194	10192	10189	10187
257.0	10184	10181	10179	10176	10174	10171	10169	10166	10164	10161
258.0	10159	10156	10154	10151	10149	10146	10144	10141	10139	10136
259.0	10134	10131	10129	10126	10124	10121	10119	10116	10114	10111
260.0	10109	10106	10104	10101	10098	10096	10093	10091	10089	10086
261.0	10084	10081	10079	10076	10074	10071	10069	10066	10064	10061
262.0	10059	10056	10054	10051	10049	10046	10044	10041	10039	10036
263.0	10034	10031	10029	10026	10024	10021	10019	10016	10014	10011
264.0	10009	10006	10004	10002	9999	9997	9994	9992	9989	9987
265.0	9984	9982	9979	9977	9974	9972	9969	9967	9965	9962
266.0	9960	9957	9955	9952	9950	9947	9945	9942	9940	9938
267.0	9935	9933	9930	9928	9925	9923	9920	9918	9916	9913
268.0	9911	9908	9906	9903	9901	9898	9896	9894	9891	9889
269.0	9886	9884	9881	9879	9876	9874	9872	9869	9867	9864
270.0	9862	9859	9857	9855	9852	9850	9847	9845	9842	9840
271.0	9838	9835	9833	9830	9828	9826	9823	9821	9818	9816
272.0	9813	9811	9809	9806	9804	9801	9799	9797	9794	9792
273.0	9789	9787	9785	9782	9780	9777	9775	9773	9770	9768
274.0	9765	9763	9761	9758	9756	9753	9751	9749	9746	9744
275.0	9741	9739	9737	9734	9732	9729	9727	9725	9722	9720
276.0	9717	9715	9713	9710	9708	9706	9703	9701	9698	9696
277.0	9694	9691	9689	9686	9684	9682	9679	9677	9675	9672
278.0	9670	9667	9665	9663	9660	9658	9656	9653	9651	9649
279.0	9646	9644	9641	9639	9637	9634	9632	9630	9627	9625
280.0	9623	9620	9618	9615	9613	9611	9608	9606	9604	9601
281.0	9599	9597	9594	9592	9590	9587	9585	9583	9580	9578
282.0	9576	9573	9571	9568	9566	9564	9561	9559	9557	9554
283.0	9552	9550	9547	9545	9543	9540	9538	9536	9533	9531
284.0	9529	9526	9524	9522	9519	9517	9515	9512	9510	9508
285.0	9505	9503	9501	9499	9496	9494	9492	9489	9487	9485
286.0	9482	9480	9478	9475	9473	9471	9468	9466	9464	9461
287.0	9459	9457	9454	9452	9450	9448	9445	9443	9441	9438
288.0	9436	9434	9431	9429	9427	9425	9422	9420	9418	9415
289.0	9413	9411	9408	9406	9404	9402	9399	9397	9395	9392
290.0	9390	9388	9385	9383	9381	9379	9376	9374	9372	9369
291.0	9367	9365	9363	9360	9358	9356	9353	9351	9349	9347
292.0	9344	9342	9340	9337	9335	9333	9331	9328	9326	9324
293.0	9322	9319	9317	9315	9312	9310	9308	9306	9303	9301
294.0	9299	9297	9294	9292	9290	9288	9285	9283	9281	9278
295.0	9276	9274	9272	9269	9267	9265	9263	9260	9258	9256
296.0	9254	9251	9249	9247	9245	9242	9240	9238	9236	9233
297.0	9231	9229	9227	9224	9222	9220	9218	9215	9213	9211
298.0	9209	9206	9204	9202	9200	9197	9195	9193	9191	9189
299.0	9186	9184	9182	9180	9177	9175	9173	9171	9168	9166
300.0	9164	9162	9159	9157	9155	9153	9151	9148	9146	9144
301.0	9142	9139	9137	9135	9133	9131	9128	9126	9124	9122
302.0	9119	9117	9115	9113	9111	9108	9106	9104	9102	9100
303.0	9097	9095	9093	9091	9088	9086	9084	9082	9080	9077
304.0	9075	9073	9071	9069	9066	9064	9062	9060	9058	9055
305.0	9053	9051	9049	9047	9044	9042	9040	9038	9036	9033
306.0	9031	9029	9027	9025	9022	9020	9018	9016	9014	9011
307.0	9009	9007	9005	9003	9001	8998	8996	8994	8992	8990
308.0	8987	8985	8983	8981	8979	8977	8974	8972	8970	8968
309.0	8966	8963	8961	8959	8957	8955	8953	8950	8948	8946
310.0	8944	8942	8940	8937	8935	8933	8931	8929	8927	8924
311.0	8922	8920	8918	8916	8914	8911	8909	8907	8905	8903
312.0	8901	8898	8896	8894	8892	8890	8888	8885	8883	8881
313.0	8879	8877	8875	8873	8870	8868	8866	8864	8862	8860
314.0	8857	8855	8853	8851	8849	8847	8845	8842	8840	8838
315.0	8836	8834	8832	8830	8827	8825	8823	8821	8819	8817
316.0	8815	8812	8810	8808	8806	8804	8802	8800	8797	8795
317.0	8793	8791	8789	8787	8785	8783	8780	8778	8776	8774
318.0	8772	8770	8768	8766	8763	8761	8759	8757	8755	8753
319.0	8751	8749	8746	8744	8742	8740	8738	8736	8734	8732

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P,mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
320.0	8729	8727	8725	8723	8721	8719	8717	8715	8713	8710
321.0	8708	8706	8704	8702	8700	8698	8696	8694	8691	8689
322.0	8687	8685	8683	8681	8679	8677	8675	8673	8670	8668
323.0	8666	8664	8662	8660	8658	8656	8654	8652	8649	8647
324.0	8645	8643	8641	8639	8637	8635	8633	8631	8628	8626
325.0	8624	8622	8620	8618	8616	8614	8612	8610	8608	8605
326.0	8603	8601	8599	8597	8595	8593	8591	8589	8587	8585
327.0	8583	8581	8578	8576	8574	8572	8570	8568	8566	8564
328.0	8562	8560	8558	8556	8554	8551	8549	8547	8545	8543
329.0	8541	8539	8537	8535	8533	8531	8529	8527	8525	8522
330.0	8520	8518	8516	8514	8512	8510	8508	8506	8504	8502
331.0	8500	8498	8496	8494	8492	8490	8487	8485	8483	8481
332.0	8479	8477	8475	8473	8471	8469	8467	8465	8463	8461
333.0	8459	8457	8455	8453	8451	8448	8446	8444	8442	8440
334.0	8438	8436	8434	8432	8430	8428	8426	8424	8422	8420
335.0	8418	8416	8414	8412	8410	8408	8406	8404	8402	8399
336.0	8397	8395	8393	8391	8389	8387	8385	8383	8381	8379
337.0	8377	8375	8373	8371	8369	8367	8365	8363	8361	8359
338.0	8357	8355	8353	8351	8349	8347	8345	8343	8341	8339
339.0	8337	8335	8333	8331	8329	8327	8325	8322	8320	8318
340.0	8316	8314	8312	8310	8308	8306	8304	8302	8300	8298
341.0	8296	8294	8292	8290	8288	8286	8284	8282	8280	8278
342.0	8276	8274	8272	8270	8268	8266	8264	8262	8260	8258
343.0	8256	8254	8252	8250	8248	8246	8244	8242	8240	8238
344.0	8236	8234	8232	8230	8228	8226	8224	8222	8220	8218
345.0	8216	8214	8212	8210	8208	8206	8204	8202	8200	8198
346.0	8196	8194	8192	8190	8188	8186	8184	8182	8180	8179
347.0	8177	8175	8173	8171	8169	8167	8165	8163	8161	8159
348.0	8157	8155	8153	8151	8149	8147	8145	8143	8141	8139
349.0	8137	8135	8133	8131	8129	8127	8125	8123	8121	8119
350.0	8117	8115	8113	8111	8109	8107	8105	8103	8102	8100
351.0	8096	8094	8092	8090	8088	8086	8084	8082	8080	8080
352.0	8078	8076	8074	8072	8070	8068	8066	8064	8062	8060
353.0	8058	8056	8054	8052	8051	8049	8047	8045	8043	8041
354.0	8039	8037	8035	8033	8031	8029	8027	8025	8023	8021
355.0	8019	8017	8016	8014	8012	8010	8008	8006	8004	8002
356.0	8000	7998	7996	7994	7992	7990	7988	7986	7984	7982
357.0	7981	7979	7977	7975	7973	7971	7969	7967	7965	7963
358.0	7961	7959	7957	7955	7953	7952	7950	7948	7946	7944
359.0	7942	7940	7938	7936	7934	7932	7930	7928	7926	7925
360.0	7923	7921	7919	7917	7915	7913	7911	7909	7907	7905
361.0	7903	7901	7900	7898	7896	7894	7892	7890	7888	7886
362.0	7884	7882	7880	7878	7877	7875	7873	7871	7869	7867
363.0	7865	7863	7861	7859	7857	7856	7854	7852	7850	7848
364.0	7846	7844	7842	7840	7838	7836	7835	7833	7831	7829
365.0	7827	7825	7823	7821	7819	7817	7816	7814	7812	7810
366.0	7808	7806	7804	7802	7800	7798	7797	7795	7793	7791
367.0	7789	7787	7785	7783	7781	7780	7778	7776	7774	7772
368.0	7770	7768	7766	7764	7763	7761	7759	7757	7755	7753
369.0	7751	7749	7747	7746	7744	7742	7740	7738	7736	7734
370.0	7732	7730	7729	7727	7725	7723	7721	7719	7717	7715
371.0	7714	7712	7710	7708	7706	7704	7702	7700	7699	7697
372.0	7695	7693	7691	7689	7687	7685	7684	7682	7680	7678
373.0	7676	7674	7672	7670	7669	7667	7665	7663	7661	7659
374.0	7657	7656	7654	7652	7650	7648	7646	7644	7642	7641
375.0	7639	7637	7635	7633	7631	7629	7628	7626	7624	7623
376.0	7620	7618	7616	7615	7613	7611	7609	7607	7605	7603
377.0	7602	7600	7598	7596	7594	7592	7590	7589	7587	7585
378.0	7583	7581	7579	7578	7576	7574	7572	7570	7568	7566
379.0	7565	7563	7561	7559	7557	7555	7554	7552	7550	7548
380.0	7546	7544	7542	7541	7539	7537	7535	7533	7531	7530
381.0	7528	7526	7524	7522	7520	7519	7517	7515	7513	7511
382.0	7509	7508	7506	7504	7502	7500	7498	7497	7495	7493
383.0	7491	7489	7487	7486	7484	7482	7480	7478	7476	7475
384.0	7471	7471	7469	7467	7466	7464	7462	7460	7458	7456
385.0	7455	7453	7451	7449	7447	7445	7444	7442	7440	7438
386.0	7436	7435	7433	7431	7429	7427	7425	7424	7422	7420
387.0	7418	7416	7415	7413	7411	7409	7407	7406	7404	7402
388.0	7400	7398	7396	7395	7393	7391	7389	7387	7386	7384
389.0	7382	7380	7378	7377	7375	7373	7371	7369	7368	7366
390.0	7364	7362	7360	7359	7357	7355	7353	7351	7350	7348
391.0	7346	7344	7342	7341	7339	7337	7335	7333	7332	7330
392.0	7328	7326	7324	7323	7321	7319	7317	7315	7314	7312
393.0	7310	7308	7306	7305	7303	7301	7299	7297	7296	7294
394.0	7292	7290	7289	7287	7285	7283	7281	7280	7278	7276
395.0	7274	7272	7271	7269	7267	7265	7264	7262	7260	7258
396.0	7256	7255	7253	7251	7249	7247	7246	7244	7242	7240
397.0	7239	7237	7235	7233	7231	7230	7228	7226	7224	7223
398.0	7221	7219	7217	7216	7214	7212	7210	7208	7207	7205
399.0	7203	7201	7200	7198	7196	7194	7192	7191	7189	7187
400.0	7185	7184	7182	7180	7178	7177	7175	7173	7171	7170
401.0	7168	7166	7164	7162	7161	7159	7157	7155	7154	7152
402.0	7150	7148	7147	7145	7143	7141	7140	7138	7136	7134
403.0	7133	7131	7129	7127	7126	7124	7122	7120	7119	7117
404.0	7115	7113	7112	7110	7108	7106	7105	7103	7101	7099
405.0	7096	7096	7094	7092	7091	7089	7087	7085	7084	7082
406.0	7080	7078	7077	7075	7073	7071	7070	7068	7066	7064
407.0	7063	7061	7059	7057	7056	7054	7052	7050	7049	7047
408.0	7045	7043	7042	7040	7038	7037	7035	7033	7031	7030
409.0	7028	7026	7024	7023	7021	7019	7017	7016	7014	7012
410.0	7011	7009	7007	7005	7004	7002	7000	6998	6997	6995
411.0	6993	6991	6990	6988	6986	6985	6983	6981	6979	6978
412.0	6976	6974	6972	6971	6969	6967	6966	6964	6962	6960
413.0	6959	6957	6955	6954	6952	6950	6948	6947	6945	6943
414.0	6942	6940	6938	6936	6935	6933	6931	6929	6928	6926
415.0	6924	6923	6921	6919	6917	6916	6914	6912	6911	6909
416.0	6907	6905	6904	6902	6900	6899	6897	6895	6894	6892
417.0	6890	6888	6887	6885	6883	6882	6880	6878	6876	6875
418.0	6873	6871	6870	6868	6866	6865	6863	6861	6859	6858
419.0	6856	6854	6853	6851	6849	6847	6846	6844	6842	6841

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
420.0	6839	6837	6836	6834	6832	6831	6829	6827	6825	6824
421.0	6822	6820	6819	6817	6815	6814	6812	6810	6808	6807
422.0	6805	6803	6802	6800	6798	6797	6795	6793	6792	6790
423.0	6788	6785	6783	6781	6778	6778	6776	6775	6773	6773
424.0	6771	6770	6768	6766	6763	6761	6760	6758	6756	6756
425.0	6754	6753	6751	6749	6748	6746	6744	6743	6741	6739
426.0	6738	6736	6734	6733	6731	6729	6728	6726	6724	6723
427.0	6721	6719	6718	6716	6714	6713	6711	6709	6708	6706
428.0	6704	6702	6701	6699	6697	6696	6694	6692	6691	6689
429.0	6687	6686	6684	6682	6681	6679	6677	6676	6674	6672
430.0	6671	6669	6667	6666	6664	6662	6661	6659	6657	6656
431.0	6654	6652	6651	6649	6647	6646	6644	6642	6641	6639
432.0	6638	6636	6634	6633	6631	6629	6628	6626	6624	6623
433.0	6621	6619	6618	6616	6614	6613	6611	6609	6608	6606
434.0	6604	6603	6601	6599	6598	6596	6594	6593	6591	6589
435.0	6588	6586	6585	6583	6581	6580	6578	6576	6575	6573
436.0	6571	6570	6568	6566	6565	6563	6561	6560	6558	6557
437.0	6555	6553	6552	6550	6548	6547	6545	6543	6542	6540
438.0	6538	6537	6535	6534	6532	6530	6529	6527	6525	6524
439.0	6522	6520	6519	6517	6516	6514	6512	6511	6509	6507
440.0	6506	6504	6502	6501	6499	6498	6496	6494	6493	6491
441.0	6489	6488	6486	6484	6483	6481	6480	6478	6476	6475
442.0	6473	6471	6470	6468	6467	6465	6463	6462	6460	6458
443.0	6457	6455	6454	6452	6450	6449	6447	6445	6444	6442
444.0	6441	6439	6437	6436	6434	6432	6431	6429	6428	6426
445.0	6424	6423	6421	6419	6418	6416	6415	6413	6411	6410
446.0	6408	6406	6405	6403	6402	6400	6398	6397	6395	6394
447.0	6392	6390	6389	6387	6385	6384	6382	6381	6379	6377
448.0	6376	6374	6373	6371	6369	6368	6366	6365	6363	6361
449.0	6360	6358	6356	6355	6353	6352	6350	6348	6347	6345
450.0	6344	6342	6340	6339	6337	6336	6334	6332	6331	6329
451.0	6328	6326	6324	6323	6321	6320	6318	6316	6315	6313
452.0	6312	6310	6308	6307	6305	6304	6302	6300	6299	6297
453.0	6296	6294	6292	6291	6289	6288	6286	6284	6283	6281
454.0	6280	6278	6276	6275	6273	6272	6270	6268	6267	6265
455.0	6264	6262	6260	6259	6257	6256	6254	6253	6251	6249
456.0	6248	6246	6245	6243	6241	6240	6238	6237	6235	6233
457.0	6232	6230	6229	6227	6226	6224	6222	6221	6219	6218
458.0	6216	6214	6213	6211	6210	6208	6207	6205	6203	6202
459.0	6200	6199	6197	6195	6194	6192	6191	6189	6188	6186
460.0	6184	6183	6181	6180	6178	6177	6175	6173	6172	6170
461.0	6169	6167	6166	6164	6162	6161	6159	6158	6156	6154
462.0	6153	6151	6150	6148	6147	6145	6143	6142	6140	6139
463.0	6137	6136	6134	6133	6131	6129	6128	6126	6125	6123
464.0	6122	6120	6118	6117	6115	6114	6112	6111	6109	6107
465.0	6106	6104	6103	6101	6100	6098	6097	6095	6093	6092
466.0	6090	6089	6087	6086	6084	6082	6081	6079	6078	6076
467.0	6075	6073	6072	6070	6068	6067	6065	6064	6062	6061
468.0	6059	6058	6056	6054	6053	6051	6050	6048	6047	6045
469.0	6044	6042	6040	6039	6037	6036	6034	6033	6031	6030
470.0	6028	6026	6025	6023	6022	6020	6019	6017	6016	6014
471.0	6013	6011	6009	6008	6006	6005	6003	6002	6000	5999
472.0	5997	5996	5994	5992	5991	5989	5988	5986	5985	5983
473.0	5982	5980	5979	5977	5975	5974	5972	5971	5969	5968
474.0	5966	5965	5963	5962	5960	5959	5957	5955	5954	5952
475.0	5951	5949	5948	5946	5945	5943	5942	5940	5939	5937
476.0	5935	5934	5932	5931	5929	5928	5926	5925	5923	5922
477.0	5920	5919	5917	5916	5914	5912	5911	5909	5908	5906
478.0	5905	5903	5902	5900	5899	5897	5896	5894	5893	5891
479.0	5890	5888	5886	5885	5883	5882	5880	5879	5877	5876
480.0	5874	5873	5871	5870	5868	5867	5865	5864	5862	5861
481.0	5859	5858	5856	5854	5853	5851	5850	5848	5847	5845
482.0	5844	5842	5841	5839	5838	5836	5835	5833	5832	5830
483.0	5829	5827	5826	5824	5823	5821	5820	5818	5817	5815
484.0	5814	5812	5810	5809	5807	5806	5804	5803	5801	5800
485.0	5798	5797	5795	5794	5792	5791	5789	5788	5786	5785
486.0	5783	5782	5780	5779	5777	5776	5774	5773	5771	5770
487.0	5768	5767	5765	5764	5762	5761	5759	5758	5756	5755
488.0	5753	5752	5750	5749	5747	5746	5744	5743	5741	5740
489.0	5738	5737	5735	5734	5732	5731	5729	5728	5726	5725
490.0	5723	5722	5720	5719	5717	5716	5714	5713	5711	5710
491.0	5708	5707	5705	5704	5702	5701	5699	5698	5696	5695
492.0	5693	5692	5690	5689	5687	5686	5684	5683	5681	5680
493.0	5678	5677	5675	5674	5672	5671	5669	5668	5666	5665
494.0	5663	5662	5660	5659	5657	5656	5654	5653	5651	5650
495.0	5648	5647	5645	5644	5643	5641	5640	5638	5637	5635
496.0	5634	5632	5631	5629	5628	5626	5625	5623	5622	5620
497.0	5619	5617	5616	5614	5613	5611	5610	5608	5607	5605
498.0	5604	5602	5601	5600	5598	5597	5595	5594	5592	5591
499.0	5589	5588	5586	5585	5583	5582	5580	5579	5577	5576
500.0	5574	5573	5571	5570	5569	5567	5566	5564	5563	5561
501.0	5560	5558	5557	5555	5554	5552	5551	5549	5548	5546
502.0	5545	5544	5542	5541	5539	5538	5536	5535	5533	5532
503.0	5530	5529	5527	5526	5524	5523	5521	5520	5519	5517
504.0	5516	5514	5513	5511	5510	5508	5507	5505	5504	5502
505.0	5501	5500	5498	5497	5495	5494	5492	5491	5489	5488
506.0	5486	5485	5483	5482	5481	5479	5478	5476	5475	5473
507.0	5472	5470	5469	5467	5466	5464	5463	5462	5460	5459
508.0	5457	5456	5454	5453	5451	5450	5448	5447	5446	5444
509.0	5443	5441	5440	5438	5437	5435	5434	5432	5431	5430
510.0	5428	5427	5425	5424	5422	5421	5419	5418	5417	5415
511.0	5414	5412	5411	5409	5408	5406	5405	5403	5402	5401
512.0	5399	5398	5396	5395	5393	5392	5390	5389	5388	5386
513.0	5385	5383	5382	5380	5379	5377	5376	5375	5373	5372
514.0	5370	5369	5367	5366	5364	5363	5362	5360	5359	5357
515.0	5356	5354	5353	5352	5350	5349	5347	5346	5344	5343
516.0	5341	5340	5339	5337	5336	5334	5333	5331	5330	5329
517.0	5327	5326	5324	5323	5321	5320	5318	5317	5316	5314
518.0	5313	5311	5310	5308	5307	5306	5304	5303	5301	5300
519.0	5298	5297	5296	5294	5293	5291	5290	5288	5287	5286

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
520.0	5284	5283	5281	5280	5278	5277	5276	5274	5273	5271
521.0	5270	5268	5267	5266	5264	5263	5261	5260	5258	5257
522.0	5256	5254	5253	5251	5250	5248	5247	5246	5244	5243
523.0	5241	5240	5239	5237	5236	5234	5233	5231	5230	5229
524.0	5227	5226	5224	5223	5221	5220	5219	5217	5216	5214
525.0	5213	5212	5210	5209	5207	5206	5204	5203	5202	5200
526.0	5199	5197	5196	5195	5193	5192	5190	5189	5187	5186
527.0	5185	5183	5182	5180	5179	5178	5176	5175	5173	5172
528.0	5171	5169	5168	5166	5165	5163	5162	5161	5159	5158
529.0	5156	5155	5154	5152	5151	5149	5148	5147	5145	5144
530.0	5142	5141	5140	5138	5137	5135	5134	5133	5131	5130
531.0	5128	5127	5126	5124	5123	5121	5120	5118	5117	5116
532.0	5114	5113	5111	5110	5109	5107	5106	5104	5103	5102
533.0	5100	5099	5097	5096	5095	5093	5092	5090	5089	5088
534.0	5086	5085	5083	5082	5081	5079	5078	5076	5075	5074
535.0	5072	5071	5070	5068	5067	5065	5064	5063	5061	5060
536.0	5058	5057	5056	5054	5053	5051	5050	5049	5047	5046
537.0	5044	5043	5042	5040	5039	5037	5036	5035	5033	5032
538.0	5031	5029	5028	5026	5025	5024	5022	5021	5019	5018
539.0	5017	5015	5014	5012	5011	5010	5008	5007	5006	5004
540.0	5003	5001	5000	4999	4997	4996	4994	4993	4992	4990
541.0	4989	4988	4986	4985	4983	4982	4981	4979	4978	4976
542.0	4975	4974	4972	4971	4970	4968	4967	4965	4964	4963
543.0	4961	4960	4959	4957	4956	4954	4953	4952	4950	4949
544.0	4947	4946	4945	4943	4942	4941	4939	4938	4936	4935
545.0	4934	4932	4931	4930	4928	4927	4925	4924	4923	4921
546.0	4920	4919	4917	4916	4914	4913	4912	4910	4909	4908
547.0	4906	4905	4904	4902	4901	4899	4898	4897	4895	4894
548.0	4893	4891	4890	4888	4887	4886	4884	4883	4882	4880
549.0	4879	4878	4876	4875	4873	4872	4871	4869	4868	4867
550.0	4865	4864	4862	4861	4860	4858	4857	4856	4854	4853
551.0	4852	4850	4849	4847	4846	4845	4843	4842	4841	4839
552.0	4838	4837	4835	4834	4833	4831	4830	4828	4827	4826
553.0	4824	4823	4822	4820	4819	4818	4816	4815	4813	4812
554.0	4811	4809	4808	4807	4805	4804	4803	4801	4800	4799
555.0	4797	4796	4794	4793	4792	4790	4789	4788	4786	4785
556.0	4784	4782	4781	4780	4778	4777	4776	4774	4773	4771
557.0	4770	4769	4767	4766	4765	4763	4762	4761	4759	4758
558.0	4757	4755	4754	4753	4751	4750	4749	4747	4746	4744
559.0	4743	4742	4740	4739	4738	4736	4735	4734	4732	4731
560.0	4730	4728	4727	4726	4724	4723	4722	4720	4719	4718
561.0	4716	4715	4714	4712	4711	4710	4708	4707	4705	4704
562.0	4703	4701	4700	4699	4697	4696	4695	4693	4692	4691
563.0	4689	4688	4687	4685	4684	4683	4681	4680	4679	4677
564.0	4676	4675	4673	4672	4671	4669	4668	4667	4665	4664
565.0	4663	4661	4660	4659	4657	4656	4655	4653	4652	4651
566.0	4649	4648	4647	4645	4644	4643	4641	4640	4639	4637
567.0	4636	4635	4633	4632	4631	4629	4628	4627	4625	4624
568.0	4623	4621	4620	4619	4617	4616	4615	4613	4612	4611
569.0	4609	4608	4607	4605	4604	4603	4601	4600	4599	4597
570.0	4596	4595	4593	4592	4591	4589	4588	4587	4585	4584
571.0	4583	4582	4580	4579	4578	4576	4575	4574	4572	4571
572.0	4570	4568	4567	4566	4564	4563	4562	4560	4559	4558
573.0	4556	4555	4554	4552	4551	4550	4548	4547	4546	4545
574.0	4543	4542	4541	4539	4538	4537	4535	4534	4533	4531
575.0	4530	4529	4527	4526	4525	4523	4522	4521	4519	4518
576.0	4517	4516	4514	4513	4512	4510	4509	4508	4506	4505
577.0	4504	4502	4501	4500	4498	4497	4496	4495	4493	4492
578.0	4491	4489	4488	4487	4485	4484	4483	4481	4480	4479
579.0	4477	4476	4475	4474	4472	4471	4470	4468	4467	4466
580.0	4464	4463	4462	4460	4459	4458	4457	4455	4454	4453
581.0	4451	4450	4449	4447	4446	4445	4443	4442	4441	4440
582.0	4438	4437	4436	4434	4433	4432	4430	4429	4428	4427
583.0	4425	4424	4423	4421	4420	4419	4417	4416	4415	4414
584.0	4412	4411	4410	4408	4407	4406	4404	4403	4402	4401
585.0	4399	4398	4397	4395	4394	4393	4391	4390	4389	4388
586.0	4386	4385	4384	4382	4381	4380	4378	4377	4376	4375
587.0	4373	4372	4371	4369	4368	4367	4366	4364	4363	4362
588.0	4360	4359	4358	4356	4355	4354	4353	4351	4350	4349
589.0	4347	4346	4345	4344	4342	4341	4340	4338	4337	4336
590.0	4335	4333	4332	4331	4329	4328	4327	4325	4324	4323
591.0	4322	4320	4319	4318	4316	4315	4314	4313	4311	4310
592.0	4309	4307	4306	4305	4304	4302	4301	4300	4298	4297
593.0	4296	4295	4293	4292	4291	4289	4288	4287	4286	4284
594.0	4283	4282	4281	4279	4278	4277	4275	4274	4273	4272
595.0	4270	4269	4268	4266	4265	4264	4263	4261	4260	4259
596.0	4257	4256	4255	4254	4252	4251	4250	4249	4247	4246
597.0	4245	4243	4242	4241	4240	4238	4237	4236	4234	4233
598.0	4232	4231	4229	4228	4227	4226	4224	4223	4222	4220
599.0	4219	4218	4217	4215	4214	4213	4212	4210	4209	4208
600.0	4206	4205	4204	4203	4201	4200	4199	4198	4196	4195
601.0	4194	4192	4191	4190	4189	4187	4186	4185	4184	4182
602.0	4181	4180	4178	4177	4176	4175	4173	4172	4171	4170
603.0	4168	4167	4166	4165	4163	4162	4161	4159	4158	4157
604.0	4156	4154	4153	4152	4151	4149	4148	4147	4146	4144
605.0	4143	4142	4140	4139	4138	4137	4135	4134	4133	4132
606.0	4130	4129	4128	4127	4125	4124	4123	4122	4120	4119
607.0	4118	4117	4115	4114	4113	4111	4110	4109	4108	4106
608.0	4105	4104	4103	4101	4100	4099	4098	4096	4095	4094
609.0	4093	4091	4090	4089	4088	4086	4085	4084	4083	4081
610.0	4080	4079	4078	4076	4075	4074	4073	4071	4070	4069
611.0	4067	4066	4065	4064	4062	4061	4060	4059	4057	4056
612.0	4055	4054	4052	4051	4050	4049	4047	4046	4045	4044
613.0	4042	4041	4040	4039	4037	4036	4035	4034	4032	4031
614.0	4030	4029	4027	4026	4025	4024	4022	4021	4020	4019
615.0	4017	4016	4015	4014	4012	4011	4010	4009	4007	4006
616.0	4005	4004	4003	4001	4000	3999	3998	3996	3995	3994
617.0	3993	3991	3990	3989	3988	3986	3985	3984	3983	3981
618.0	3980	3979	3978	3976	3975	3974	3973	3971	3970	3969
619.0	3968	3966	3965	3964	3963	3962	3960	3959	3958	3957



## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P,mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
620.0	3955	3954	3953	3952	3950	3949	3948	3947	3945	3944
621.0	3943	3942	3940	3939	3938	3937	3936	3934	3933	3932
622.0	3931	3929	3928	3927	3926	3924	3923	3921	3920	3919
623.0	3918	3917	3916	3915	3913	3912	3911	3910	3908	3907
624.0	3906	3905	3903	3902	3901	3900	3898	3897	3896	3895
625.0	3894	3892	3891	3890	3889	3887	3886	3885	3884	3882
626.0	3881	3880	3879	3878	3876	3875	3874	3873	3871	3870
627.0	3869	3868	3867	3865	3864	3863	3862	3860	3859	3858
628.0	3857	3855	3854	3853	3852	3851	3849	3848	3847	3846
629.0	3844	3843	3842	3841	3840	3838	3837	3836	3835	3833
630.0	3832	3831	3830	3829	3827	3826	3825	3824	3822	3821
631.0	3820	3819	3818	3816	3815	3814	3813	3811	3810	3809
632.0	3808	3807	3805	3804	3803	3802	3800	3799	3798	3797
633.0	3796	3794	3793	3792	3791	3789	3788	3787	3786	3785
634.0	3783	3782	3781	3780	3779	3777	3776	3775	3774	3772
635.0	3771	3770	3769	3768	3766	3765	3764	3763	3762	3760
636.0	3759	3758	3757	3755	3754	3753	3752	3751	3749	3748
637.0	3747	3746	3745	3743	3742	3741	3740	3738	3737	3736
638.0	3735	3734	3732	3731	3730	3729	3728	3726	3725	3724
639.0	3723	3722	3720	3719	3718	3717	3716	3714	3713	3712
640.0	3711	3709	3708	3707	3706	3705	3703	3702	3701	3700
641.0	3699	3697	3696	3695	3694	3693	3691	3690	3689	3688
642.0	3687	3685	3684	3683	3682	3681	3679	3678	3677	3676
643.0	3675	3673	3672	3671	3670	3669	3667	3666	3665	3664
644.0	3663	3661	3660	3659	3658	3656	3655	3654	3653	3652
645.0	3650	3649	3648	3647	3646	3644	3643	3642	3641	3640
646.0	3639	3637	3636	3635	3634	3633	3631	3630	3629	3628
647.0	3627	3625	3624	3623	3622	3621	3619	3618	3617	3616
648.0	3615	3613	3612	3611	3610	3609	3607	3606	3605	3604
649.0	3603	3601	3600	3599	3598	3597	3595	3594	3593	3592
650.0	3591	3589	3588	3587	3586	3585	3584	3582	3581	3580
651.0	3579	3578	3576	3575	3574	3573	3572	3570	3569	3568
652.0	3567	3566	3564	3563	3562	3561	3560	3559	3557	3556
653.0	3555	3554	3553	3551	3550	3549	3548	3547	3545	3544
654.0	3543	3542	3541	3540	3538	3537	3536	3535	3534	3532
655.0	3531	3530	3529	3528	3527	3525	3524	3523	3522	3521
656.0	3519	3518	3517	3516	3515	3513	3512	3511	3510	3509
657.0	3508	3506	3505	3504	3503	3502	3500	3499	3498	3497
658.0	3496	3495	3493	3492	3491	3490	3489	3487	3486	3485
659.0	3484	3483	3482	3480	3479	3478	3477	3476	3475	3473
660.0	3472	3471	3470	3469	3467	3466	3465	3464	3463	3462
661.0	3460	3459	3458	3457	3456	3455	3453	3452	3451	3450
662.0	3449	3447	3446	3445	3444	3443	3442	3440	3439	3438
663.0	3437	3436	3435	3433	3432	3431	3430	3429	3428	3426
664.0	3425	3424	3423	3422	3420	3419	3418	3417	3416	3415
665.0	3423	3422	3421	3419	3418	3417	3416	3415	3414	3413
666.0	3421	3420	3419	3418	3417	3416	3415	3414	3413	3412
667.0	3419	3418	3417	3416	3415	3414	3413	3412	3411	3410
668.0	3417	3416	3415	3414	3413	3412	3411	3410	3409	3408
669.0	3415	3414	3413	3412	3411	3410	3409	3408	3407	3406
670.0	3413	3412	3411	3410	3409	3408	3407	3406	3405	3404
671.0	3411	3410	3409	3408	3407	3406	3405	3404	3403	3402
672.0	3409	3408	3407	3406	3405	3404	3403	3402	3401	3400
673.0	3407	3406	3405	3404	3403	3402	3401	3400	3399	3398
674.0	3405	3404	3403	3402	3401	3400	3399	3398	3397	3396
675.0	3403	3402	3401	3400	3399	3398	3397	3396	3395	3394
676.0	3401	3400	3399	3398	3397	3396	3395	3394	3393	3392
677.0	3400	3399	3398	3397	3396	3395	3394	3393	3392	3391
678.0	3398	3397	3396	3395	3394	3393	3392	3391	3390	3389
679.0	3397	3396	3395	3394	3393	3392	3391	3390	3389	3388
680.0	3395	3394	3393	3392	3391	3390	3389	3388	3387	3386
681.0	3393	3392	3391	3390	3389	3388	3387	3386	3385	3384
682.0	3391	3390	3389	3388	3387	3386	3385	3384	3383	3382
683.0	3389	3388	3387	3386	3385	3384	3383	3382	3381	3380
684.0	3387	3386	3385	3384	3383	3382	3381	3380	3379	3378
685.0	3385	3384	3383	3382	3381	3380	3379	3378	3377	3376
686.0	3383	3382	3381	3380	3379	3378	3377	3376	3375	3374
687.0	3381	3380	3379	3378	3377	3376	3375	3374	3373	3372
688.0	3379	3378	3377	3376	3375	3374	3373	3372	3371	3370
689.0	3377	3376	3375	3374	3373	3372	3371	3370	3369	3368
690.0	3375	3374	3373	3372	3371	3370	3369	3368	3367	3366
691.0	3373	3372	3371	3370	3369	3368	3367	3366	3365	3364
692.0	3371	3370	3369	3368	3367	3366	3365	3364	3363	3362
693.0	3369	3368	3367	3366	3365	3364	3363	3362	3361	3360
694.0	3367	3366	3365	3364	3363	3362	3361	3360	3359	3358
695.0	3365	3364	3363	3362	3361	3360	3359	3358	3357	3356
696.0	3363	3362	3361	3360	3359	3358	3357	3356	3355	3354
697.0	3361	3360	3359	3358	3357	3356	3355	3354	3353	3352
698.0	3359	3358	3357	3356	3355	3354	3353	3352	3351	3350
699.0	3357	3356	3355	3354	3353	3352	3351	3350	3349	3348
700.0	3355	3354	3353	3352	3351	3350	3349	3348	3347	3346
701.0	3353	3352	3351	3350	3349	3348	3347	3346	3345	3344
702.0	3351	3350	3349	3348	3347	3346	3345	3344	3343	3342
703.0	3349	3348	3347	3346	3345	3344	3343	3342	3341	3340
704.0	3347	3346	3345	3344	3343	3342	3341	3340	3339	3338
705.0	3345	3344	3343	3342	3341	3340	3339	3338	3337	3336
706.0	3343	3342	3341	3340	3339	3338	3337	3336	3335	3334
707.0	3341	3340	3339	3338	3337	3336	3335	3334	3333	3332
708.0	3339	3338	3337	3336	3335	3334	3333	3332	3331	3330
709.0	3337	3336	3335	3334	3333	3332	3331	3330	3329	3328
710.0	3335	3334	3333	3332	3331	3330	3329	3328	3327	3326
711.0	3333	3332	3331	3330	3329	3328	3327	3326	3325	3324
712.0	3331	3330	3329	3328	3327	3326	3325	3324	3323	3322
713.0	3329	3328	3327	3326	3325	3324	3323	3322	3321	3320
714.0	3327	3326	3325	3324	3323	3322	3321	3320	3319	3318
715.0	3325	3324	3323	3322	3321	3320	3319	3318	3317	3316
716.0	3323	3322	3321	3320	3319	3318	3317	3316	3315	3314
717.0	3321	3320	3319	3318	3317	3316	3315	3314	3313	3312
718.0	3319	3318	3317	3316	3315	3314	3313	3312	3311	3310
719.0	3317	3316	3315	3314	3313	3312	3311	3310	3309	3308

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
720.0	2790	2789	2788	2787	2786	2785	2784	2782	2781	2780
721.0	2779	2778	2777	2776	2775	2774	2773	2771	2770	2769
722.0	2768	2767	2766	2765	2764	2763	2762	2761	2759	2758
723.0	2757	2756	2755	2754	2753	2752	2751	2750	2748	2747
724.0	2746	2745	2744	2743	2742	2741	2740	2739	2738	2736
725.0	2735	2734	2733	2732	2731	2730	2729	2728	2727	2726
726.0	2724	2723	2722	2721	2720	2719	2718	2717	2716	2715
727.0	2714	2712	2711	2710	2709	2708	2707	2706	2705	2704
728.0	2703	2702	2701	2699	2698	2697	2696	2695	2694	2693
729.0	2692	2691	2690	2689	2687	2686	2685	2684	2683	2682
730.0	2681	2680	2679	2678	2677	2676	2674	2673	2672	2671
731.0	2670	2669	2668	2667	2666	2665	2664	2663	2661	2660
732.0	2659	2658	2657	2656	2655	2654	2653	2652	2651	2650
733.0	2648	2647	2646	2645	2644	2643	2642	2641	2640	2639
734.0	2638	2637	2635	2634	2633	2632	2631	2630	2629	2628
735.0	2627	2626	2625	2624	2623	2621	2620	2619	2618	2617
736.0	2616	2615	2614	2613	2612	2611	2610	2608	2607	2606
737.0	2605	2604	2603	2602	2601	2600	2599	2598	2597	2596
738.0	2594	2593	2592	2591	2590	2589	2588	2587	2586	2585
739.0	2584	2583	2582	2581	2579	2578	2577	2576	2575	2574
740.0	2573	2572	2571	2570	2569	2568	2567	2565	2564	2563
741.0	2562	2561	2560	2559	2558	2557	2556	2555	2554	2553
742.0	2552	2550	2549	2548	2547	2546	2545	2544	2543	2542
743.0	2541	2540	2539	2538	2537	2535	2534	2533	2532	2531
744.0	2530	2529	2528	2527	2526	2525	2524	2523	2522	2521
745.0	2519	2518	2517	2516	2515	2514	2513	2512	2511	2510
746.0	2509	2508	2507	2506	2505	2503	2502	2501	2500	2499
747.0	2498	2497	2496	2495	2494	2493	2492	2491	2490	2489
748.0	2487	2486	2485	2484	2483	2482	2481	2480	2479	2478
749.0	2477	2476	2475	2474	2473	2472	2470	2469	2468	2467
750.0	2466	2465	2464	2463	2462	2461	2460	2459	2458	2457
751.0	2456	2455	2453	2452	2451	2450	2449	2448	2447	2446
752.0	2445	2444	2443	2442	2441	2440	2439	2438	2437	2435
753.0	2434	2433	2432	2431	2430	2429	2428	2427	2426	2425
754.0	2424	2423	2422	2421	2420	2419	2417	2416	2415	2414
755.0	2413	2412	2411	2410	2409	2408	2407	2406	2405	2404
756.0	2403	2402	2401	2400	2398	2397	2396	2395	2394	2393
757.0	2392	2391	2390	2389	2388	2387	2386	2385	2384	2383
758.0	2382	2381	2380	2378	2377	2376	2375	2374	2373	2372
759.0	2371	2370	2369	2368	2367	2366	2365	2364	2363	2362
760.0	2361	2360	2358	2357	2356	2355	2354	2353	2352	2351
761.0	2350	2349	2348	2347	2346	2345	2344	2343	2342	2341
762.0	2340	2339	2337	2336	2335	2334	2333	2332	2331	2330
763.0	2329	2328	2327	2326	2325	2324	2323	2322	2321	2320
764.0	2319	2318	2317	2316	2314	2313	2312	2311	2310	2309
765.0	2308	2307	2306	2305	2304	2303	2302	2301	2300	2299
766.0	2298	2297	2296	2295	2294	2293	2291	2290	2289	2288
767.0	2287	2286	2285	2284	2283	2282	2281	2280	2279	2278
768.0	2277	2276	2275	2274	2273	2272	2271	2270	2269	2268
769.0	2266	2265	2264	2263	2262	2261	2260	2259	2258	2257
770.0	2256	2255	2254	2253	2252	2251	2250	2249	2248	2247
771.0	2246	2245	2244	2243	2242	2240	2239	2238	2237	2236
772.0	2235	2234	2233	2232	2231	2230	2229	2228	2227	2226
773.0	2225	2224	2223	2222	2221	2220	2219	2218	2217	2216
774.0	2215	2214	2213	2211	2210	2209	2208	2207	2206	2205
775.0	2204	2203	2202	2201	2200	2199	2198	2197	2196	2195
776.0	2194	2193	2192	2191	2190	2189	2188	2187	2186	2185
777.0	2184	2183	2181	2180	2179	2178	2177	2176	2175	2174
778.0	2173	2172	2171	2170	2169	2168	2167	2166	2165	2164
779.0	2163	2162	2161	2160	2159	2158	2157	2156	2155	2154
780.0	2153	2152	2151	2150	2149	2148	2146	2145	2144	2143
781.0	2142	2141	2140	2139	2138	2137	2136	2135	2134	2133
782.0	2132	2131	2130	2129	2128	2127	2126	2125	2124	2123
783.0	2122	2121	2120	2119	2118	2117	2116	2115	2114	2113
784.0	2112	2111	2110	2109	2107	2106	2105	2104	2103	2102
785.0	2101	2100	2099	2098	2097	2096	2095	2094	2093	2092
786.0	2091	2090	2089	2088	2087	2086	2085	2084	2083	2082
787.0	2081	2080	2079	2078	2077	2076	2075	2074	2073	2072
788.0	2071	2070	2069	2068	2067	2066	2065	2064	2063	2062
789.0	2060	2059	2058	2057	2056	2055	2054	2053	2052	2051
790.0	2050	2049	2048	2047	2046	2045	2044	2043	2042	2041
791.0	2040	2039	2038	2037	2036	2035	2034	2033	2032	2031
792.0	2030	2029	2028	2027	2026	2025	2024	2023	2022	2021
793.0	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
794.0	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
795.0	2000	1998	1997	1996	1995	1994	1993	1992	1991	1990
796.0	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980
797.0	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970
798.0	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960
799.0	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950
800.0	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940
801.0	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930
802.0	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920
803.0	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910
804.0	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900
805.0	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890
806.0	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880
807.0	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870
808.0	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860
809.0	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850
810.0	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840
811.0	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830
812.0	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820
813.0	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810
814.0	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800
815.0	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790
816.0	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780
817.0	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770
818.0	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760
819.0	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
820.0	1749	1748	1747	1746	1745	1744	1743	1742	1742	1741
821.0	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731
822.0	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721
823.0	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711
824.0	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701
825.0	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691
826.0	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681
827.0	1680	1679	1679	1678	1677	1676	1675	1674	1673	1672
828.0	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662
829.0	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652
830.0	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642
831.0	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632
832.0	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623
833.0	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613
834.0	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603
835.0	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593
836.0	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584
837.0	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574
838.0	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564
839.0	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554
840.0	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545
841.0	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535
842.0	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525
843.0	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516
844.0	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506
845.0	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496
846.0	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487
847.0	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477
848.0	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468
849.0	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458
850.0	1457	1456	1455	1454	1453	1452	1452	1451	1450	1449
851.0	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439
852.0	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429
853.0	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420
854.0	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410
855.0	1409	1408	1408	1407	1406	1405	1404	1403	1402	1401
856.0	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391
857.0	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381
858.0	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372
859.0	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362
860.0	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353
861.0	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343
862.0	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334
863.0	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324
864.0	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315
865.0	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305
866.0	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296
867.0	1295	1295	1294	1293	1292	1291	1290	1289	1288	1287
868.0	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277
869.0	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268
870.0	1267	1266	1265	1264	1263	1262	1262	1261	1260	1259
871.0	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249
872.0	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239
873.0	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230
874.0	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221
875.0	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211
876.0	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202
877.0	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192
878.0	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183
879.0	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174
880.0	1173	1172	1172	1171	1170	1169	1168	1167	1166	1165
881.0	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155
882.0	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146
883.0	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137
884.0	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127
885.0	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118
886.0	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109
887.0	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099
888.0	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090
889.0	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081
890.0	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072
891.0	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062
892.0	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053
893.0	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044
894.0	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035
895.0	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025
896.0	1025	1024	1023	1022	1021	1020	1019	1018	1017	1016
897.0	1016	1015	1014	1013	1012	1011	1010	1009	1008	1007
898.0	1007	1006	1005	1004	1003	1002	1001	1000	999	998
899.0	998	997	996	995	994	993	992	991	990	989
900.0	988	988	987	986	985	984	983	982	981	980
901.0	979	978	977	976	975	974	973	972	971	970
902.0	970	969	968	967	966	965	964	963	962	961
903.0	961	960	959	958	957	956	955	954	953	952
904.0	952	951	950	949	948	947	946	945	944	943
905.0	943	942	941	940	939	938	937	936	935	934
906.0	934	933	932	931	930	929	928	927	926	925
907.0	925	924	923	922	921	920	919	918	917	916
908.0	915	915	914	913	912	911	910	909	908	907
909.0	906	905	905	904	903	902	901	900	899	898
910.0	897	896	895	895	894	893	892	891	890	889
911.0	888	887	886	885	885	884	883	882	881	880
912.0	879	878	877	876	875	874	873	872	871	870
913.0	870	869	868	867	866	865	864	863	862	861
914.0	861	860	859	858	857	856	855	854	853	852
915.0	852	851	850	849	848	847	846	845	844	843
916.0	843	842	841	840	839	838	837	836	835	834
917.0	834	833	832	831	830	829	828	827	826	825
918.0	825	824	823	822	821	820	819	818	817	816
919.0	816	815	814	813	812	811	810	809	808	807

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
920.0	807	806	805	804	803	802	801	801	800	799
921.0	798	797	796	795	794	793	792	792	791	790
922.0	789	788	787	786	785	784	783	783	782	781
923.0	780	779	778	777	776	775	774	774	773	772
924.0	771	770	769	768	767	766	765	765	764	763
925.0	762	761	760	759	758	757	756	756	755	754
926.0	753	752	751	750	749	748	747	747	746	745
927.0	744	743	742	741	740	739	738	738	737	736
928.0	735	734	733	732	731	730	729	729	728	727
929.0	726	725	724	723	722	721	720	720	719	718
930.0	717	716	715	714	713	712	711	711	710	709
931.0	708	707	706	705	704	703	702	702	701	700
932.0	699	698	697	696	695	694	693	693	692	691
933.0	691	690	689	688	687	686	685	684	683	682
934.0	682	681	680	679	678	677	676	675	674	673
935.0	673	672	671	670	669	668	667	666	665	664
936.0	664	663	662	661	660	659	658	657	656	655
937.0	655	654	653	652	651	650	649	648	647	646
938.0	646	645	644	643	642	641	640	639	638	637
939.0	637	636	635	634	633	632	631	630	629	628
940.0	628	627	626	625	624	623	622	621	620	619
941.0	620	619	618	617	616	615	614	613	612	611
942.0	611	610	609	608	607	606	605	604	603	602
943.0	602	601	600	599	598	597	596	595	594	593
944.0	593	592	591	590	589	588	587	586	585	584
945.0	584	583	582	581	580	579	578	577	576	575
946.0	575	574	573	572	571	570	569	568	567	566
947.0	567	566	565	564	563	562	561	560	559	558
948.0	558	557	556	555	554	553	552	551	550	549
949.0	549	548	547	546	545	544	543	542	541	540
950.0	540	539	538	537	536	535	534	533	532	531
951.0	532	531	530	529	528	527	526	525	524	523
952.0	523	522	521	520	519	518	517	516	515	514
953.0	514	513	512	511	510	509	508	507	506	505
954.0	505	504	503	502	501	500	499	498	497	496
955.0	497	496	495	494	493	492	491	490	489	488
956.0	488	487	486	485	484	483	482	481	480	479
957.0	479	478	477	476	475	474	473	472	471	470
958.0	470	469	468	467	466	465	464	463	462	461
959.0	462	461	460	459	458	457	456	455	454	453
960.0	453	452	451	450	449	448	447	446	445	444
961.0	444	443	442	441	440	439	438	437	436	435
962.0	435	434	433	432	431	430	429	428	427	426
963.0	426	425	424	423	422	421	420	419	418	417
964.0	418	417	416	415	414	413	412	411	410	409
965.0	410	409	408	407	406	405	404	403	402	401
966.0	401	400	399	398	397	396	395	394	393	392
967.0	392	391	390	389	388	387	386	385	384	383
968.0	384	383	382	381	380	379	378	377	376	375
969.0	375	374	373	372	371	370	369	368	367	366
970.0	366	365	364	363	362	361	360	359	358	357
971.0	358	357	356	355	354	353	352	351	350	349
972.0	349	348	347	346	345	344	343	342	341	340
973.0	341	340	339	338	337	336	335	334	333	332
974.0	332	331	330	329	328	327	326	325	324	323
975.0	323	322	321	320	319	318	317	316	315	314
976.0	315	314	313	312	311	310	309	308	307	306
977.0	306	305	304	303	302	301	300	299	298	297
978.0	298	297	296	295	294	293	292	291	290	289
979.0	289	288	287	286	285	284	283	282	281	280
980.0	281	280	279	278	277	276	275	274	273	272
981.0	272	271	270	269	268	267	266	265	264	263
982.0	263	262	261	260	259	258	257	256	255	254
983.0	255	254	253	252	251	250	249	248	247	246
984.0	246	245	244	243	242	241	240	239	238	237
985.0	238	237	236	235	234	233	232	231	230	229
986.0	229	228	227	226	225	224	223	222	221	220
987.0	221	220	219	218	217	216	215	214	213	212
988.0	212	211	210	209	208	207	206	205	204	203
989.0	204	203	202	201	200	199	198	197	196	195
990.0	195	194	193	192	191	190	189	188	187	186
991.0	187	186	185	184	183	182	181	180	179	178
992.0	178	177	176	175	174	173	172	171	170	169
993.0	170	169	168	167	166	165	164	163	162	161
994.0	161	160	159	158	157	156	155	154	153	152
995.0	153	152	151	150	149	148	147	146	145	144
996.0	145	144	143	142	141	140	139	138	137	136
997.0	136	135	134	133	132	131	130	129	128	127
998.0	128	127	126	125	124	123	122	121	120	119
999.0	119	118	117	116	115	114	113	112	111	110
1000.0	111	110	109	108	107	106	105	104	103	102
1001.0	102	101	100	99	98	97	96	95	94	93
1002.0	94	93	92	91	90	89	88	87	86	85
1003.0	86	85	84	83	82	81	80	79	78	77
1004.0	77	76	75	74	73	72	71	70	69	68
1005.0	69	68	67	66	65	64	63	62	61	60
1006.0	61	60	59	58	57	56	55	54	53	52
1007.0	52	51	50	49	48	47	46	45	44	43
1008.0	44	43	42	41	40	39	38	37	36	35
1009.0	35	34	33	32	31	30	29	28	27	26
1010.0	27	26	25	24	23	22	21	20	19	18
1011.0	19	18	17	16	15	14	13	12	11	10
1012.0	10	9	8	7	6	5	4	3	2	1
1013.0	2	1	0	-1	-2	-3	-4	-5	-6	-7
1014.0	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15
1015.0	-15	-16	-17	-18	-19	-20	-21	-22	-23	-24
1016.0	-23	-24	-25	-26	-27	-28	-29	-30	-31	-32
1017.0	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40
1018.0	-39	-40	-41	-42	-43	-44	-45	-46	-47	-48
1019.0	-48	-49	-50	-51	-52	-53	-54	-55	-56	-57

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
1020.0	-56	-57	-58	-59	-59	-60	-61	-62	-63	-63
1021.0	-64	-65	-66	-67	-68	-68	-69	-70	-71	-72
1022.0	-73	-73	-74	-75	-76	-77	-78	-78	-79	-80
1023.0	-81	-82	-83	-83	-84	-85	-86	-87	-87	-88
1024.0	-89	-90	-91	-92	-92	-93	-94	-95	-96	-97
1025.0	-97	-98	-99	-100	-101	-101	-102	-103	-104	-105
1026.0	-106	-106	-107	-108	-109	-110	-111	-111	-112	-113
1027.0	-114	-115	-115	-116	-117	-118	-119	-120	-120	-121
1028.0	-122	-123	-124	-125	-125	-126	-127	-128	-129	-129
1029.0	-130	-131	-132	-133	-134	-134	-135	-136	-137	-138
1030.0	-139	-139	-140	-141	-142	-143	-143	-144	-145	-146
1031.0	-147	-148	-148	-149	-150	-151	-152	-152	-153	-154
1032.0	-155	-156	-157	-157	-158	-159	-160	-161	-161	-162
1033.0	-163	-164	-165	-166	-166	-167	-168	-169	-170	-170
1034.0	-171	-172	-173	-174	-175	-175	-176	-177	-178	-179
1035.0	-180	-180	-181	-182	-183	-184	-184	-185	-186	-187
1036.0	-188	-188	-189	-190	-191	-192	-193	-193	-194	-195
1037.0	-196	-197	-197	-198	-199	-200	-201	-202	-202	-203
1038.0	-204	-205	-206	-206	-207	-208	-209	-210	-211	-211
1039.0	-212	-213	-214	-215	-215	-216	-217	-218	-219	-220
1040.0	-220	-221	-222	-223	-224	-224	-225	-226	-227	-228
1041.0	-228	-229	-230	-231	-232	-233	-233	-234	-235	-236
1042.0	-237	-237	-238	-239	-240	-241	-242	-242	-243	-244
1043.0	-245	-246	-246	-247	-248	-249	-250	-250	-251	-252
1044.0	-253	-254	-255	-255	-256	-257	-258	-259	-259	-260
1045.0	-261	-262	-263	-263	-264	-265	-266	-267	-267	-268
1046.0	-269	-270	-271	-272	-272	-273	-274	-275	-276	-276
1047.0	-277	-278	-279	-280	-280	-281	-282	-283	-284	-285
1048.0	-285	-286	-287	-288	-289	-289	-290	-291	-292	-293
1049.0	-293	-294	-295	-296	-297	-297	-298	-299	-300	-301
1050.0	-302	-302	-303	-304	-305	-306	-306	-307	-308	-309
1051.0	-310	-311	-312	-312	-313	-314	-314	-315	-316	-317
1052.0	-318	-318	-319	-320	-321	-322	-323	-323	-324	-325
1053.0	-326	-327	-327	-328	-329	-330	-331	-331	-332	-333
1054.0	-334	-335	-335	-336	-337	-338	-339	-339	-340	-341
1055.0	-342	-343	-343	-344	-345	-346	-347	-348	-348	-349
1056.0	-351	-351	-352	-352	-353	-354	-355	-356	-356	-357
1057.0	-359	-359	-360	-360	-361	-362	-363	-364	-364	-365
1058.0	-366	-367	-368	-368	-369	-370	-371	-372	-372	-373
1059.0	-374	-375	-376	-376	-377	-378	-379	-380	-380	-381
1060.0	-382	-383	-384	-384	-385	-386	-387	-388	-389	-389
1061.0	-390	-391	-392	-393	-393	-394	-395	-396	-397	-397
1062.0	-398	-399	-400	-401	-401	-402	-403	-404	-405	-405
1063.0	-406	-407	-408	-409	-409	-410	-411	-412	-413	-413
1064.0	-414	-415	-416	-417	-417	-418	-419	-420	-421	-421
1065.0	-422	-423	-424	-425	-426	-427	-428	-429	-429	-430
1066.0	-430	-431	-432	-433	-434	-435	-436	-437	-437	-438
1067.0	-438	-439	-440	-441	-441	-442	-443	-444	-445	-445
1068.0	-446	-447	-448	-448	-449	-450	-451	-452	-452	-453
1069.0	-454	-455	-456	-456	-457	-458	-459	-460	-460	-461
1070.0	-462	-463	-464	-464	-465	-466	-467	-468	-468	-469
1071.0	-470	-471	-472	-472	-473	-474	-475	-476	-476	-477
1072.0	-478	-479	-480	-480	-481	-482	-483	-484	-484	-485
1073.0	-486	-487	-487	-488	-489	-490	-491	-491	-492	-493
1074.0	-494	-495	-495	-496	-497	-498	-499	-499	-500	-501
1075.0	-502	-503	-503	-504	-505	-506	-507	-507	-508	-509
1076.0	-510	-511	-511	-512	-513	-514	-514	-515	-516	-517
1077.0	-518	-518	-519	-520	-521	-522	-522	-523	-524	-525
1078.0	-526	-526	-527	-528	-529	-530	-530	-531	-532	-533
1079.0	-533	-534	-535	-536	-537	-537	-538	-539	-540	-541
1080.0	-541	-542	-543	-544	-545	-545	-546	-547	-548	-548
1081.0	-549	-550	-551	-552	-553	-553	-554	-555	-556	-556
1082.0	-557	-558	-559	-560	-561	-562	-563	-563	-564	-564
1083.0	-565	-566	-567	-567	-568	-569	-570	-571	-571	-572
1084.0	-573	-574	-575	-575	-576	-577	-578	-578	-579	-580
1085.0	-581	-582	-582	-583	-584	-585	-586	-586	-587	-588
1086.0	-589	-589	-590	-591	-592	-593	-593	-594	-595	-596
1087.0	-597	-597	-598	-599	-600	-601	-601	-602	-603	-604
1088.0	-604	-605	-606	-607	-608	-608	-609	-610	-611	-612
1089.0	-612	-613	-614	-615	-615	-616	-617	-618	-619	-619
1090.0	-620	-621	-622	-622	-623	-624	-625	-626	-626	-627
1091.0	-628	-629	-630	-630	-631	-632	-633	-633	-634	-635
1092.0	-636	-637	-637	-638	-639	-640	-641	-641	-642	-643
1093.0	-644	-644	-645	-646	-647	-648	-648	-649	-650	-651
1094.0	-651	-652	-653	-654	-655	-655	-656	-657	-658	-659
1095.0	-659	-660	-661	-662	-663	-664	-664	-665	-666	-666
1096.0	-667	-668	-669	-669	-670	-671	-672	-673	-673	-674
1097.0	-675	-676	-676	-677	-678	-679	-680	-680	-681	-682
1098.0	-683	-684	-685	-685	-686	-687	-687	-688	-689	-690
1099.0	-691	-691	-692	-693	-694	-694	-695	-696	-697	-698
1100.0	-698	-699	-700	-701	-701	-702	-703	-704	-705	-705
1101.0	-706	-707	-708	-708	-709	-710	-711	-712	-712	-713
1102.0	-714	-715	-715	-716	-717	-718	-719	-719	-720	-721
1103.0	-722	-722	-723	-724	-725	-726	-726	-727	-728	-729
1104.0	-729	-730	-731	-732	-733	-733	-734	-735	-736	-736
1105.0	-737	-738	-739	-740	-740	-741	-742	-743	-743	-744
1106.0	-745	-746	-746	-747	-748	-749	-750	-750	-751	-752
1107.0	-753	-753	-754	-755	-756	-757	-757	-758	-759	-760
1108.0	-760	-761	-762	-763	-764	-764	-765	-766	-767	-767
1109.0	-768	-769	-770	-771	-771	-772	-773	-774	-774	-775
1110.0	-776	-777	-777	-778	-779	-780	-781	-781	-782	-783
1111.0	-784	-784	-785	-786	-787	-788	-788	-789	-790	-791
1112.0	-791	-792	-793	-794	-795	-796	-796	-797	-798	-798
1113.0	-799	-800	-801	-801	-802	-803	-804	-804	-805	-806
1114.0	-807	-808	-808	-809	-810	-811	-811	-812	-813	-814
1115.0	-815	-816	-817	-818	-818	-819	-819	-820	-821	-821
1116.0	-823	-823	-824	-825	-826	-827	-828	-828	-829	-830
1117.0	-830	-831	-831	-832	-833	-834	-835	-835	-836	-837
1118.0	-838	-838	-839	-840	-841	-841	-842	-843	-844	-845
1119.0	-845	-846	-847	-848	-849	-849	-850	-851	-851	-852

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
1120.0	-853	-854	-854	-855	-856	-857	-858	-858	-859	-860
1121.0	-861	-861	-862	-863	-864	-865	-865	-866	-867	-868
1122.0	-868	-869	-870	-871	-871	-872	-873	-874	-874	-875
1123.0	-876	-877	-877	-878	-879	-880	-881	-881	-882	-883
1124.0	-884	-884	-885	-886	-887	-887	-888	-889	-889	-890
1125.0	-891	-892	-893	-894	-894	-895	-896	-897	-897	-898
1126.0	-899	-900	-900	-901	-902	-903	-903	-904	-905	-906
1127.0	-907	-907	-908	-909	-910	-910	-911	-912	-913	-913
1128.0	-914	-915	-916	-916	-917	-918	-919	-920	-920	-921
1129.0	-922	-923	-923	-924	-925	-926	-926	-927	-928	-929
1130.0	-929	-930	-931	-932	-932	-933	-934	-935	-936	-936
1131.0	-937	-938	-939	-939	-940	-941	-942	-942	-943	-944
1132.0	-945	-945	-946	-947	-948	-948	-949	-950	-951	-952
1133.0	-952	-953	-954	-955	-955	-956	-957	-958	-958	-959
1134.0	-960	-961	-961	-962	-963	-964	-964	-965	-966	-967
1135.0	-967	-968	-969	-970	-971	-971	-972	-973	-974	-974
1136.0	-975	-976	-977	-977	-978	-979	-980	-980	-981	-982
1137.0	-983	-983	-984	-985	-986	-986	-987	-988	-989	-989
1138.0	-990	-991	-992	-992	-993	-994	-995	-996	-996	-997
1139.0	-998	-999	-999	-1000	-1001	-1002	-1002	-1003	-1004	-1005
1140.0	-1005	-1006	-1007	-1008	-1008	-1009	-1010	-1011	-1011	-1012
1141.0	-1013	-1014	-1014	-1015	-1016	-1017	-1017	-1018	-1019	-1020
1142.0	-1020	-1021	-1022	-1023	-1024	-1024	-1025	-1026	-1027	-1027
1143.0	-1028	-1029	-1030	-1030	-1031	-1032	-1033	-1033	-1034	-1035
1144.0	-1036	-1036	-1037	-1038	-1039	-1039	-1040	-1041	-1042	-1042
1145.0	-1043	-1044	-1045	-1045	-1046	-1047	-1048	-1048	-1049	-1050
1146.0	-1051	-1051	-1052	-1053	-1054	-1054	-1055	-1056	-1057	-1057
1147.0	-1058	-1059	-1060	-1060	-1061	-1062	-1063	-1063	-1064	-1065
1148.0	-1066	-1066	-1067	-1068	-1069	-1069	-1070	-1071	-1072	-1072
1149.0	-1073	-1074	-1075	-1076	-1076	-1077	-1078	-1079	-1079	-1080
1150.0	-1081	-1082	-1082	-1083	-1084	-1085	-1085	-1086	-1087	-1088
1151.0	-1088	-1089	-1090	-1091	-1091	-1092	-1093	-1094	-1094	-1095
1152.0	-1096	-1097	-1097	-1098	-1099	-1100	-1100	-1101	-1102	-1103
1153.0	-1103	-1104	-1105	-1106	-1106	-1107	-1108	-1109	-1109	-1110
1154.0	-1111	-1112	-1112	-1113	-1114	-1115	-1115	-1116	-1117	-1118
1155.0	-1118	-1119	-1120	-1121	-1121	-1122	-1123	-1124	-1124	-1125
1156.0	-1126	-1127	-1127	-1128	-1129	-1129	-1130	-1131	-1132	-1132
1157.0	-1133	-1134	-1135	-1135	-1136	-1137	-1138	-1138	-1139	-1140
1158.0	-1141	-1141	-1142	-1143	-1144	-1144	-1145	-1146	-1147	-1147
1159.0	-1148	-1149	-1150	-1150	-1151	-1152	-1153	-1153	-1154	-1155
1160.0	-1156	-1156	-1157	-1158	-1159	-1159	-1160	-1161	-1162	-1162
1161.0	-1163	-1164	-1165	-1165	-1166	-1167	-1168	-1168	-1169	-1170
1162.0	-1171	-1171	-1172	-1173	-1174	-1174	-1175	-1176	-1177	-1177
1163.0	-1178	-1179	-1179	-1180	-1181	-1182	-1182	-1183	-1184	-1185
1164.0	-1185	-1186	-1187	-1188	-1188	-1189	-1190	-1191	-1191	-1192
1165.0	-1193	-1194	-1194	-1195	-1196	-1197	-1197	-1198	-1199	-1200
1166.0	-1200	-1201	-1202	-1203	-1203	-1204	-1205	-1206	-1206	-1207
1167.0	-1208	-1208	-1209	-1210	-1211	-1211	-1212	-1213	-1214	-1214
1168.0	-1215	-1216	-1217	-1217	-1218	-1219	-1220	-1220	-1221	-1222
1169.0	-1223	-1223	-1224	-1225	-1226	-1226	-1227	-1228	-1229	-1229
1170.0	-1230	-1231	-1231	-1232	-1233	-1234	-1234	-1235	-1236	-1237
1171.0	-1237	-1238	-1239	-1240	-1240	-1241	-1242	-1243	-1243	-1244
1172.0	-1245	-1246	-1246	-1247	-1248	-1248	-1249	-1250	-1251	-1251
1173.0	-1252	-1253	-1254	-1254	-1255	-1256	-1257	-1257	-1258	-1259
1174.0	-1260	-1260	-1261	-1262	-1263	-1263	-1264	-1265	-1265	-1266
1175.0	-1267	-1268	-1268	-1269	-1270	-1271	-1271	-1272	-1273	-1274
1176.0	-1274	-1275	-1276	-1277	-1277	-1278	-1279	-1280	-1280	-1281
1177.0	-1282	-1282	-1283	-1284	-1285	-1285	-1286	-1287	-1288	-1288
1178.0	-1289	-1290	-1291	-1291	-1292	-1293	-1294	-1294	-1295	-1296
1179.0	-1296	-1297	-1298	-1299	-1299	-1300	-1301	-1302	-1302	-1303
1180.0	-1304	-1305	-1305	-1306	-1307	-1307	-1308	-1309	-1310	-1310
1181.0	-1311	-1312	-1313	-1313	-1314	-1315	-1316	-1316	-1317	-1318
1182.0	-1319	-1319	-1320	-1321	-1321	-1322	-1323	-1324	-1324	-1325
1183.0	-1326	-1327	-1327	-1328	-1329	-1330	-1330	-1331	-1332	-1332
1184.0	-1333	-1334	-1335	-1335	-1336	-1337	-1338	-1338	-1339	-1340
1185.0	-1341	-1341	-1342	-1343	-1343	-1344	-1345	-1346	-1346	-1347
1186.0	-1348	-1349	-1349	-1350	-1351	-1352	-1352	-1353	-1354	-1354
1187.0	-1355	-1356	-1357	-1357	-1358	-1359	-1360	-1360	-1361	-1362
1188.0	-1363	-1363	-1364	-1365	-1365	-1366	-1367	-1368	-1368	-1369
1189.0	-1370	-1371	-1371	-1372	-1373	-1373	-1374	-1375	-1376	-1376
1190.0	-1377	-1378	-1379	-1379	-1380	-1381	-1382	-1382	-1383	-1384
1191.0	-1384	-1385	-1386	-1387	-1387	-1388	-1389	-1390	-1390	-1391
1192.0	-1392	-1392	-1393	-1394	-1395	-1395	-1396	-1397	-1398	-1398
1193.0	-1399	-1400	-1401	-1401	-1402	-1403	-1403	-1404	-1405	-1406
1194.0	-1406	-1407	-1408	-1409	-1409	-1410	-1411	-1411	-1412	-1413
1195.0	-1414	-1414	-1415	-1416	-1417	-1417	-1418	-1419	-1419	-1420
1196.0	-1421	-1422	-1423	-1423	-1424	-1425	-1426	-1426	-1427	-1427
1197.0	-1428	-1429	-1430	-1430	-1431	-1432	-1433	-1433	-1434	-1435
1198.0	-1435	-1436	-1437	-1438	-1438	-1439	-1440	-1441	-1441	-1442
1199.0	-1443	-1443	-1444	-1445	-1446	-1446	-1447	-1448	-1449	-1449



GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIBARS

P, mb	0	1	2	3	4	5	6	7	8	9
1200.	-1450	-1457	-1464	-1472	-1479	-1486	-1493	-1501	-1508	-1515
1210.	-1522	-1530	-1537	-1544	-1551	-1558	-1565	-1573	-1580	-1587
1220.	-1594	-1601	-1608	-1616	-1623	-1630	-1637	-1644	-1651	-1658
1230.	-1666	-1673	-1680	-1687	-1694	-1701	-1708	-1715	-1722	-1729
1240.	-1736	-1744	-1751	-1758	-1765	-1772	-1779	-1786	-1793	-1800
1250.	-1807	-1814	-1821	-1828	-1835	-1842	-1849	-1856	-1863	-1870
1260.	-1877	-1884	-1891	-1898	-1905	-1912	-1919	-1926	-1933	-1940
1270.	-1946	-1953	-1960	-1967	-1974	-1981	-1988	-1995	-2002	-2009
1280.	-2016	-2022	-2029	-2036	-2043	-2050	-2057	-2064	-2071	-2077
1290.	-2084	-2091	-2098	-2105	-2112	-2118	-2125	-2132	-2139	-2146
1300.	-2153	-2159	-2166	-2173	-2180	-2186	-2193	-2200	-2207	-2214
1310.	-2220	-2227	-2234	-2241	-2247	-2254	-2261	-2268	-2274	-2281
1320.	-2288	-2294	-2301	-2308	-2315	-2321	-2328	-2335	-2341	-2348
1330.	-2355	-2361	-2368	-2375	-2381	-2388	-2395	-2401	-2408	-2415
1340.	-2421	-2428	-2435	-2441	-2448	-2454	-2461	-2468	-2474	-2481
1350.	-2487	-2494	-2501	-2507	-2514	-2520	-2527	-2534	-2540	-2547
1360.	-2553	-2560	-2566	-2573	-2579	-2586	-2593	-2599	-2606	-2612
1370.	-2619	-2625	-2632	-2638	-2645	-2651	-2658	-2664	-2671	-2677
1380.	-2684	-2690	-2697	-2703	-2710	-2716	-2723	-2729	-2735	-2742
1390.	-2748	-2755	-2761	-2768	-2774	-2780	-2787	-2793	-2800	-2806
1400.	-2813	-2819	-2825	-2832	-2838	-2845	-2851	-2857	-2864	-2870
1410.	-2876	-2883	-2889	-2896	-2902	-2908	-2915	-2921	-2927	-2934
1420.	-2940	-2946	-2953	-2959	-2965	-2972	-2978	-2984	-2991	-2997
1430.	-3003	-3009	-3016	-3022	-3028	-3035	-3041	-3047	-3053	-3060
1440.	-3066	-3072	-3078	-3085	-3091	-3097	-3103	-3110	-3116	-3122
1450.	-3128	-3135	-3141	-3147	-3153	-3159	-3166	-3172	-3178	-3184
1460.	-3190	-3197	-3203	-3209	-3215	-3221	-3228	-3234	-3240	-3246
1470.	-3252	-3258	-3265	-3271	-3277	-3283	-3289	-3295	-3301	-3308
1480.	-3314	-3320	-3326	-3332	-3338	-3344	-3350	-3356	-3363	-3369
1490.	-3375	-3381	-3387	-3393	-3399	-3405	-3411	-3417	-3423	-3429
1500.	-3435	-3442	-3448	-3454	-3460	-3466	-3472	-3478	-3484	-3490
1510.	-3496	-3502	-3508	-3514	-3520	-3526	-3532	-3538	-3544	-3550
1520.	-3556	-3562	-3568	-3574	-3580	-3586	-3592	-3598	-3604	-3610
1530.	-3616	-3622	-3628	-3634	-3640	-3646	-3652	-3657	-3663	-3669
1540.	-3675	-3681	-3687	-3693	-3699	-3705	-3711	-3717	-3723	-3729
1550.	-3734	-3740	-3746	-3752	-3758	-3764	-3770	-3776	-3782	-3787
1560.	-3793	-3799	-3805	-3811	-3817	-3823	-3828	-3834	-3840	-3846
1570.	-3852	-3858	-3863	-3869	-3875	-3881	-3887	-3893	-3898	-3904
1580.	-3910	-3916	-3922	-3927	-3933	-3939	-3945	-3951	-3956	-3962
1590.	-3968	-3974	-3980	-3985	-3991	-3997	-4003	-4008	-4014	-4020
1600.	-4026	-4031	-4037	-4043	-4049	-4054	-4060	-4066	-4072	-4077
1610.	-4083	-4089	-4094	-4100	-4106	-4112	-4117	-4123	-4129	-4134
1620.	-4140	-4146	-4151	-4157	-4163	-4169	-4174	-4180	-4186	-4191
1630.	-4197	-4203	-4208	-4214	-4219	-4225	-4231	-4236	-4242	-4248
1640.	-4253	-4259	-4265	-4270	-4276	-4282	-4287	-4293	-4298	-4304
1650.	-4310	-4315	-4321	-4326	-4332	-4338	-4343	-4349	-4354	-4360
1660.	-4366	-4371	-4377	-4382	-4388	-4393	-4399	-4405	-4410	-4416
1670.	-4421	-4427	-4432	-4438	-4443	-4449	-4454	-4460	-4466	-4471
1680.	-4477	-4482	-4488	-4493	-4499	-4504	-4510	-4515	-4521	-4526
1690.	-4532	-4537	-4543	-4548	-4554	-4559	-4565	-4570	-4576	-4581
1700.	-4587	-4592	-4598	-4603	-4609	-4614	-4619	-4625	-4630	-4636
1710.	-4641	-4647	-4652	-4658	-4663	-4668	-4674	-4679	-4685	-4690
1720.	-4696	-4701	-4706	-4712	-4717	-4723	-4728	-4734	-4739	-4744
1730.	-4750	-4755	-4761	-4766	-4771	-4777	-4782	-4787	-4793	-4798
1740.	-4804	-4809	-4814	-4820	-4825	-4830	-4836	-4841	-4846	-4852
1750.	-4857	-4863	-4868	-4873	-4879	-4884	-4889	-4895	-4900	-4905
1760.	-4911	-4916	-4921	-4927	-4932	-4937	-4942	-4948	-4953	-4958
1770.	-4964	-4969	-4974	-4980	-4985	-4990	-4995			

Table VIII  
GEOPOTENTIAL ALTITUDE IN METERS AS A FUNCTION OF PRESSURE IN  
MILLIMETERS OF MERCURY

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
6.50		32001	31990	31980	31970	31960	31949	31939	31929	31919
6.60	31909	31899	31889	31878	31868	31858	31848	31838	31828	31818
6.70	31808	31798	31788	31778	31768	31758	31749	31739	31729	31719
6.80	31709	31699	31690	31680	31670	31660	31650	31641	31631	31621
6.90	31612	31602	31592	31583	31573	31563	31554	31544	31535	31525
7.00	31515	31506	31496	31487	31477	31468	31458	31449	31440	31430
7.10	31421	31411	31402	31393	31383	31374	31365	31355	31346	31337
7.20	31327	31318	31309	31300	31290	31281	31272	31263	31254	31245
7.30	31235	31226	31217	31208	31199	31190	31181	31172	31163	31154
7.40	31145	31136	31127	31118	31109	31100	31091	31082	31073	31064
7.50	31055	31046	31037	31029	31020	31011	31002	30993	30984	30976
7.60	30967	30958	30949	30941	30932	30923	30915	30906	30897	30888
7.70	30880	30871	30863	30854	30845	30837	30828	30820	30811	30802
7.80	30794	30785	30777	30768	30760	30751	30743	30734	30726	30718
7.90	30709	30701	30692	30684	30675	30667	30659	30650	30642	30634
8.00	30625	30617	30609	30600	30592	30584	30576	30567	30559	30551
8.10	30543	30535	30526	30518	30510	30502	30494	30486	30477	30469
8.20	30461	30453	30445	30437	30429	30421	30413	30405	30397	30389
8.30	30381	30373	30365	30357	30349	30341	30333	30325	30317	30309
8.40	30301	30293	30285	30277	30269	30262	30254	30246	30238	30230
8.50	30222	30215	30207	30199	30191	30183	30176	30168	30160	30153
8.60	30145	30137	30129	30122	30114	30106	30099	30091	30083	30076
8.70	30068	30060	30053	30045	30038	30030	30022	30015	30007	30000
8.80	29992	29985	29977	29970	29962	29955	29947	29940	29932	29925
8.90	29917	29910	29902	29895	29888	29880	29873	29865	29858	29851
9.00	29843	29836	29828	29821	29814	29806	29799	29792	29785	29777
9.10	29770	29763	29755	29748	29741	29734	29726	29719	29712	29705
9.20	29698	29690	29683	29676	29669	29662	29654	29647	29640	29633
9.30	29626	29619	29612	29605	29597	29590	29583	29576	29569	29562
9.40	29555	29548	29541	29534	29527	29520	29513	29506	29499	29492
9.50	29485	29478	29471	29464	29457	29450	29443	29436	29430	29423
9.60	29416	29409	29402	29395	29388	29381	29374	29368	29361	29354
9.70	29347	29340	29334	29327	29320	29313	29306	29300	29293	29286
9.80	29279	29273	29266	29259	29252	29246	29239	29232	29226	29219
9.90	29212	29206	29199	29192	29186	29179	29172	29166	29159	29152

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
10.00	29146	29139	29133	29126	29119	29113	29106	29100	29093	29087
10.10	29080	29073	29067	29060	29054	29047	29041	29034	29028	29021
10.20	29015	29008	29002	28995	28989	28983	28976	28970	28963	28957
10.30	28950	28944	28938	28931	28925	28918	28912	28906	28899	28893
10.40	28880	28874	28868	28861	28855	28849	28842	28836	28830	28823
10.50	28823	28817	28811	28805	28798	28792	28786	28780	28773	28767
10.60	28761	28755	28749	28742	28736	28730	28724	28718	28711	28705
10.70	28699	28693	28687	28681	28674	28668	28662	28656	28650	28644
10.80	28638	28632	28625	28619	28613	28607	28601	28595	28589	28583
10.90	28577	28571	28565	28559	28553	28547	28541	28535	28529	28523
11.00	28517	28511	28505	28499	28493	28487	28481	28475	28469	28463
11.10	28457	28451	28445	28439	28433	28427	28422	28416	28410	28404
11.20	28398	28392	28386	28380	28374	28369	28363	28357	28351	28345
11.30	28339	28334	28328	28322	28316	28310	28305	28299	28293	28287
11.40	28281	28276	28270	28264	28258	28253	28247	28241	28235	28229
11.50	28224	28218	28212	28207	28201	28195	28190	28184	28178	28173
11.60	28167	28161	28156	28150	28144	28139	28133	28127	28122	28116
11.70	28110	28105	28099	28094	28088	28082	28077	28071	28066	28060
11.80	28054	28049	28043	28038	28032	28027	28021	28016	28010	28004
11.90	27999	27993	27988	27982	27977	27971	27966	27960	27955	27949
12.00	27944	27938	27933	27928	27922	27917	27911	27906	27900	27895
12.10	27889	27884	27879	27873	27868	27862	27857	27851	27846	27841
12.20	27835	27830	27825	27819	27814	27808	27803	27798	27792	27787
12.30	27782	27776	27771	27766	27760	27755	27750	27744	27739	27734
12.40	27728	27723	27718	27713	27707	27702	27697	27691	27686	27681
12.50	27676	27670	27665	27660	27655	27650	27644	27639	27634	27629
12.60	27623	27618	27613	27608	27603	27597	27592	27587	27582	27577
12.70	27572	27566	27561	27556	27551	27546	27541	27535	27530	27525
12.80	27520	27515	27510	27505	27500	27494	27489	27484	27479	27474
12.90	27469	27464	27459	27454	27449	27444	27439	27433	27428	27423
13.00	27418	27413	27408	27403	27398	27393	27388	27383	27378	27373
13.10	27368	27363	27358	27353	27348	27343	27338	27333	27328	27323
13.20	27318	27313	27308	27303	27298	27293	27288	27284	27279	27274
13.30	27269	27264	27259	27254	27249	27244	27239	27234	27229	27225
13.40	27220	27215	27210	27205	27200	27195	27190	27186	27181	27176
13.50	27171	27166	27161	27156	27152	27147	27142	27137	27132	27127
13.60	27123	27118	27113	27108	27103	27099	27094	27089	27084	27079
13.70	27075	27070	27065	27060	27056	27051	27046	27041	27036	27032
13.80	27027	27022	27018	27013	27008	27003	26999	26994	26989	26984
13.90	26980	26975	26970	26966	26961	26956	26952	26947	26942	26937
14.00	26933	26928	26923	26919	26914	26909	26905	26900	26896	26891
14.10	26886	26882	26877	26872	26868	26863	26858	26854	26849	26845
14.20	26840	26835	26831	26826	26822	26817	26812	26808	26803	26799
14.30	26794	26790	26785	26780	26776	26771	26767	26762	26758	26753
14.40	26749	26744	26739	26735	26730	26726	26721	26717	26712	26708
14.50	26703	26699	26694	26690	26685	26681	26676	26672	26667	26663
14.60	26658	26654	26649	26645	26640	26636	26632	26627	26623	26618
14.70	26614	26609	26605	26600	26596	26592	26587	26583	26578	26574
14.80	26569	26565	26561	26556	26552	26547	26543	26539	26534	26530
14.90	26525	26521	26517	26512	26508	26504	26500	26495	26490	26486
15.00	26482	26477	26473	26469	26464	26460	26456	26451	26447	26443
15.10	26438	26434	26430	26425	26421	26417	26412	26408	26404	26400
15.20	26395	26391	26387	26382	26378	26374	26370	26365	26361	26357
15.30	26352	26348	26344	26340	26335	26331	26327	26323	26318	26314
15.40	26310	26306	26301	26297	26293	26289	26285	26280	26276	26272
15.50	26268	26263	26259	26255	26251	26247	26242	26238	26234	26230
15.60	26226	26222	26217	26213	26209	26205	26201	26197	26192	26188
15.70	26184	26180	26176	26172	26167	26163	26159	26155	26151	26147
15.80	26143	26138	26134	26130	26126	26122	26118	26114	26110	26106
15.90	26101	26097	26093	26089	26085	26081	26077	26073	26069	26065
16.00	26061	26057	26052	26048	26044	26040	26036	26032	26028	26024
16.10	26020	26016	26012	26008	26004	26000	25996	25992	25988	25984
16.20	25980	25976	25972	25968	25964	25960	25956	25952	25948	25944
16.30	25940	25936	25932	25928	25924	25920	25916	25912	25908	25904
16.40	25900	25896	25892	25888	25884	25880	25876	25872	25868	25864
16.50	25860	25856	25852	25848	25844	25840	25836	25832	25828	25824
16.60	25821	25817	25813	25809	25805	25801	25797	25793	25789	25785
16.70	25782	25778	25774	25770	25766	25762	25758	25754	25751	25747
16.80	25743	25739	25735	25731	25727	25723	25719	25716	25712	25708
16.90	25704	25700	25696	25693	25689	25685	25681	25677	25673	25670
17.00	25666	25662	25658	25654	25650	25647	25643	25639	25635	25631
17.10	25628	25624	25620	25616	25612	25609	25605	25601	25597	25593
17.20	25590	25586	25582	25578	25575	25571	25567	25563	25559	25556
17.30	25552	25548	25544	25541	25537	25533	25529	25526	25522	25518
17.40	25514	25511	25507	25503	25500	25496	25492	25488	25485	25481
17.50	25477	25473	25470	25466	25462	25459	25455	25451	25448	25444
17.60	25440	25436	25433	25429	25425	25422	25418	25414	25411	25407
17.70	25403	25400	25396	25392	25389	25385	25381	25378	25374	25370
17.80	25367	25363	25359	25356	25352	25348	25345	25341	25338	25334
17.90	25330	25327	25323	25319	25316	25312	25309	25305	25301	25298
18.00	25294	25290	25287	25283	25280	25276	25272	25269	25265	25262
18.10	25258	25255	25251	25247	25244	25240	25237	25233	25229	25226
18.20	25222	25219	25215	25212	25208	25205	25201	25197	25194	25190
18.30	25187	25183	25180	25176	25173	25169	25165	25162	25158	25155
18.40	25148	25144	25141	25137	25134	25130	25127	25123	25120	25116
18.50	25116	25113	25109	25106	25102	25099	25095	25092	25088	25085
18.60	25081	25078	25074	25071	25067	25064	25060	25057	25053	25050
18.70	25046	25043	25039	25036	25032	25029	25026	25022	25019	25015
18.80	25012	25008	25005	25001	24998	24995	24991	24988	24984	24981
18.90	24977	24974	24970	24967	24964	24960	24957	24953	24950	24947
19.00	24943	24940	24936	24933	24929	24926	24923	24919	24916	24912
19.10	24909	24906	24902	24899	24896	24892	24889	24885	24882	24879
19.20	24875	24872	24868	24865	24862	24858	24855	24852	24848	24845
19.30	24842	24838	24835	24831	24828	24825	24821	24818	24815	24811
19.40	24808	24805	24801	24798	24795	24791	24788	24785	24781	24778
19.50	24775	24771	24768	24765	24761	24758	24755	24751	24748	24745
19.60	24742	24738	24735	24732	24728	24725	24722	24718	24715	24712
19.70	24709	24705	24702	24699	24695	24692	24689	24686	24682	24679
19.80	24676	24672	24669	24666	24663	24659	24656	24653	24650	24646
19.90	24643	24640	24637	24633	24630	24627	24624	24620	24617	24614

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
20.0	24611	24578	24546	24514	24482	24451	24419	24388	24357	24326
21.0	24295	24264	24234	24203	24173	24143	24113	24083	24053	24024
22.0	23994	23965	23936	23907	23878	23849	23821	23792	23764	23735
23.0	23707	23679	23651	23624	23596	23569	23541	23514	23487	23460
24.0	23433	23406	23380	23353	23327	23300	23274	23248	23222	23196
25.0	23170	23144	23119	23093	23068	23043	23018	22993	22968	22943
26.0	22918	22893	22869	22844	22820	22796	22771	22747	22723	22699
27.0	22676	22652	22628	22605	22581	22558	22534	22511	22488	22465
28.0	22442	22419	22397	22374	22351	22329	22306	22284	22262	22239
29.0	22217	22195	22173	22151	22130	22108	22086	22065	22043	22022
30.0	22000	21979	21958	21936	21915	21894	21873	21853	21832	21811
31.0	21790	21770	21749	21729	21708	21688	21668	21648	21628	21607
32.0	21588	21568	21548	21528	21508	21488	21469	21449	21430	21410
33.0	21391	21372	21352	21333	21314	21295	21276	21257	21238	21219
34.0	21201	21182	21163	21145	21126	21107	21089	21071	21052	21034
35.0	21016	20998	20980	20961	20943	20925	20908	20890	20872	20854
36.0	20836	20819	20801	20784	20766	20749	20731	20714	20697	20679
37.0	20662	20645	20628	20611	20594	20577	20560	20543	20526	20509
38.0	20492	20476	20459	20442	20426	20409	20393	20376	20360	20344
39.0	20327	20311	20295	20279	20263	20247	20230	20214	20199	20183
40.0	20167	20151	20135	20119	20104	20088	20072	20057	20041	20026
41.0	20010	19995	19979	19964	19948	19933	19918	19903	19887	19872
42.0	19857	19842	19827	19812	19797	19782	19767	19752	19737	19722
43.0	19708	19693	19679	19664	19649	19635	19620	19606	19591	19577
44.0	19562	19548	19533	19519	19505	19491	19476	19462	19448	19434
45.0	19420	19406	19392	19378	19364	19350	19336	19322	19308	19294
46.0	19280	19267	19253	19239	19225	19212	19198	19185	19171	19157
47.0	19144	19130	19117	19104	19090	19077	19063	19050	19037	19024
48.0	19010	18997	18984	18971	18958	18945	18932	18919	18906	18893
49.0	18880	18867	18854	18841	18828	18815	18802	18790	18777	18764
50.0	18752	18739	18726	18714	18701	18688	18676	18663	18651	18638
51.0	18626	18614	18601	18589	18576	18564	18552	18540	18527	18515
52.0	18503	18491	18478	18466	18454	18442	18430	18418	18406	18394
53.0	18382	18370	18358	18346	18334	18322	18311	18299	18287	18275
54.0	18263	18252	18240	18228	18217	18205	18193	18182	18170	18159
55.0	18147	18136	18124	18113	18101	18090	18078	18067	18056	18044
56.0	18033	18022	18010	17999	17988	17976	17965	17954	17943	17932
57.0	17921	17909	17898	17887	17876	17865	17854	17843	17832	17821
58.0	17810	17799	17788	17777	17767	17756	17745	17734	17723	17713
59.0	17702	17691	17680	17670	17659	17648	17638	17627	17616	17606
60.0	17595	17585	17574	17564	17553	17543	17532	17522	17511	17501
61.0	17490	17480	17470	17459	17449	17439	17428	17418	17408	17398
62.0	17387	17377	17367	17357	17347	17336	17326	17316	17306	17296
63.0	17286	17276	17266	17256	17246	17236	17226	17216	17206	17196
64.0	17186	17176	17166	17156	17147	17137	17127	17117	17107	17097
65.0	17088	17078	17068	17059	17049	17039	17029	17020	17010	17001
66.0	16991	16981	16972	16962	16953	16943	16934	16924	16914	16905
67.0	16896	16886	16877	16867	16858	16848	16839	16830	16820	16811
68.0	16802	16792	16783	16774	16764	16755	16746	16737	16727	16718
69.0	16709	16700	16691	16681	16672	16663	16654	16645	16636	16627
70.0	16618	16609	16600	16591	16582	16573	16564	16555	16546	16537
71.0	16528	16519	16510	16501	16492	16483	16474	16466	16457	16448
72.0	16439	16430	16422	16413	16404	16395	16386	16378	16369	16360
73.0	16352	16343	16334	16326	16317	16308	16300	16291	16283	16274
74.0	16265	16257	16248	16240	16231	16223	16214	16206	16197	16189
75.0	16180	16172	16163	16155	16146	16138	16130	16121	16113	16105
76.0	16096	16088	16080	16071	16063	16055	16046	16038	16030	16022
77.0	16013	16005	15997	15989	15980	15972	15964	15956	15948	15940
78.0	15932	15923	15915	15907	15899	15891	15883	15875	15867	15859
79.0	15851	15843	15835	15827	15819	15811	15803	15795	15787	15779
80.0	15771	15763	15755	15747	15739	15731	15724	15716	15708	15700
81.0	15692	15684	15677	15669	15661	15653	15645	15638	15630	15622
82.0	15614	15607	15599	15591	15583	15576	15569	15561	15553	15545
83.0	15537	15530	15522	15515	15507	15499	15492	15484	15477	15469
84.0	15462	15454	15446	15439	15431	15424	15416	15409	15401	15394
85.0	15386	15379	15372	15364	15357	15349	15342	15334	15327	15320
86.0	15312	15305	15298	15290	15283	15276	15268	15261	15254	15246
87.0	15239	15232	15224	15217	15210	15203	15195	15188	15181	15174
88.0	15167	15159	15152	15145	15138	15131	15123	15116	15109	15102
89.0	15095	15088	15081	15074	15066	15059	15052	15045	15038	15031
90.0	15024	15017	15010	15003	14996	14989	14982	14975	14968	14961
91.0	14954	14947	14940	14933	14926	14919	14912	14905	14898	14892
92.0	14885	14878	14871	14864	14857	14850	14843	14837	14830	14823
93.0	14816	14809	14802	14796	14789	14782	14775	14769	14762	14755
94.0	14748	14742	14735	14728	14721	14715	14708	14701	14695	14688
95.0	14681	14674	14668	14661	14654	14648	14641	14635	14628	14621
96.0	14615	14608	14602	14595	14588	14582	14575	14569	14562	14556
97.0	14549	14542	14536	14529	14523	14516	14510	14503	14497	14490
98.0	14484	14478	14471	14465	14458	14452	14445	14439	14432	14426
99.0	14420	14413	14407	14400	14394	14388	14381	14375	14369	14362
100.0	14356	14350	14343	14337	14331	14324	14318	14312	14305	14299
101.0	14293	14286	14280	14274	14268	14261	14255	14249	14243	14237
102.0	14230	14224	14218	14212	14205	14199	14193	14187	14181	14175
103.0	14168	14162	14156	14150	14144	14138	14132	14125	14119	14113
104.0	14107	14101	14095	14089	14083	14077	14071	14065	14059	14052
105.0	14046	14040	14034	14028	14022	14016	14010	14004	13998	13992
106.0	13986	13980	13974	13968	13962	13956	13951	13945	13939	13933
107.0	13927	13921	13915	13909	13903	13897	13891	13885	13880	13874
108.0	13868	13862	13856	13850	13844	13839	13833	13827	13821	13815
109.0	13809	13804	13798	13792	13786	13780	13775	13769	13763	13757
110.0	13751	13746	13740	13734	13728	13723	13717	13711	13705	13700
111.0	13694	13688	13683	13677	13671	13666	13660	13654	13649	13643
112.0	13637	13632	13626	13620	13615	13609	13603	13598	13592	13586
113.0	13581	13575	13570	13564	13558	13553	13547	13542	13536	13530
114.0	13525	13519	13514	13508	13503	13497	13492	13486	13481	13475
115.0	13470	13464	13459	13453	13448	13442	13437	13431	13426	13420
116.0	13415	13409	13404	13398	13393	13387	13382	13376	13371	13366
117.0	13360	13355	13349	13344	13339	13333	13328	13322	13317	13312
118.0	13306	13301	13295	13290	13285	13279	13274	13269	13263	13258
119.0	13253	13247	13242	13237	13231	13226	13221	13216	13210	13205

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
120.0	13200	13194	13189	13184	13179	13173	13168	13163	13158	13152
121.0	13147	13142	13137	13131	13126	13121	13116	13110	13105	13100
122.0	13095	13090	13084	13079	13074	13069	13064	13059	13053	13048
123.0	13043	13038	13033	13028	13022	13017	13012	13007	13002	12997
124.0	12992	12987	12981	12976	12971	12966	12961	12956	12951	12946
125.0	12941	12936	12931	12926	12921	12915	12910	12905	12900	12895
126.0	12890	12885	12880	12875	12870	12865	12860	12855	12850	12845
127.0	12840	12835	12830	12825	12820	12815	12810	12805	12800	12795
128.0	12790	12785	12780	12775	12771	12766	12761	12756	12751	12746
129.0	12741	12736	12731	12726	12721	12716	12712	12707	12702	12697
130.0	12692	12687	12682	12677	12673	12668	12663	12658	12653	12648
131.0	12643	12639	12634	12629	12624	12619	12614	12610	12605	12600
132.0	12595	12590	12586	12581	12576	12571	12566	12562	12557	12552
133.0	12547	12543	12538	12533	12528	12524	12519	12514	12509	12505
134.0	12500	12495	12490	12486	12481	12476	12472	12467	12462	12457
135.0	12453	12448	12443	12439	12434	12429	12425	12420	12415	12411
136.0	12406	12401	12397	12392	12387	12383	12378	12373	12369	12364
137.0	12359	12355	12350	12346	12341	12336	12332	12327	12323	12318
138.0	12313	12309	12304	12300	12295	12290	12286	12281	12277	12272
139.0	12268	12263	12258	12254	12249	12245	12240	12236	12231	12227
140.0	12222	12218	12213	12209	12204	12199	12195	12190	12186	12181
141.0	12177	12172	12168	12163	12159	12154	12150	12146	12141	12137
142.0	12132	12128	12123	12119	12114	12110	12105	12101	12097	12092
143.0	12088	12083	12079	12074	12070	12065	12061	12057	12052	12048
144.0	12043	12039	12035	12030	12026	12021	12017	12013	12008	12004
145.0	12000	11995	11991	11986	11982	11978	11973	11969	11965	11960
146.0	11956	11952	11947	11943	11939	11934	11930	11926	11921	11917
147.0	11913	11908	11904	11900	11895	11891	11887	11883	11878	11874
148.0	11870	11865	11861	11857	11853	11848	11844	11840	11835	11831
149.0	11827	11823	11818	11814	11810	11806	11801	11797	11793	11789
150.0	11785	11780	11776	11772	11768	11763	11759	11755	11751	11747
151.0	11742	11738	11734	11730	11726	11721	11717	11713	11709	11705
152.0	11701	11696	11692	11688	11684	11680	11676	11671	11667	11663
153.0	11659	11655	11651	11647	11642	11638	11634	11630	11626	11622
154.0	11618	11614	11609	11605	11601	11597	11593	11589	11585	11581
155.0	11577	11573	11568	11564	11560	11556	11552	11548	11544	11540
156.0	11536	11532	11528	11524	11520	11516	11511	11507	11503	11499
157.0	11495	11491	11487	11483	11479	11475	11471	11467	11463	11459
158.0	11455	11451	11447	11443	11439	11435	11431	11427	11423	11419
159.0	11415	11411	11407	11403	11399	11395	11391	11387	11383	11379
160.0	11375	11371	11367	11363	11359	11355	11352	11348	11344	11340
161.0	11336	11332	11328	11324	11320	11316	11312	11308	11304	11300
162.0	11296	11293	11289	11285	11281	11277	11273	11269	11265	11261
163.0	11257	11254	11250	11246	11242	11238	11234	11230	11226	11223
164.0	11219	11215	11211	11207	11203	11199	11196	11192	11188	11184
165.0	11180	11176	11172	11169	11165	11161	11157	11153	11149	11146
166.0	11142	11138	11134	11130	11127	11123	11119	11115	11111	11108
167.0	11104	11100	11096	11092	11089	11085	11081	11077	11073	11070
168.0	11066	11062	11058	11055	11051	11047	11043	11040	11036	11032
169.0	11028	11024	11021	11017	11013	11010	11006	11002	10998	10995
170.0	10991	10987	10983	10980	10976	10972	10968	10965	10961	10957
171.0	10954	10950	10946	10942	10939	10935	10931	10928	10924	10920
172.0	10917	10913	10909	10905	10902	10898	10894	10891	10887	10883
173.0	10880	10876	10872	10869	10865	10861	10858	10854	10850	10847
174.0	10843	10839	10836	10832	10828	10825	10821	10817	10814	10810
175.0	10806	10803	10799	10796	10792	10788	10785	10781	10777	10774
176.0	10770	10766	10763	10759	10756	10752	10748	10745	10741	10737
177.0	10734	10730	10727	10723	10719	10716	10712	10709	10705	10701
178.0	10698	10694	10691	10687	10683	10680	10676	10673	10669	10666
179.0	10662	10658	10655	10651	10648	10644	10641	10637	10633	10630
180.0	10626	10623	10619	10616	10612	10608	10605	10601	10598	10594
181.0	10591	10587	10584	10580	10577	10573	10569	10566	10562	10559
182.0	10555	10552	10548	10545	10541	10538	10534	10531	10527	10524
183.0	10520	10517	10513	10510	10506	10503	10499	10496	10492	10489
184.0	10485	10482	10478	10475	10471	10468	10464	10461	10457	10454
185.0	10450	10447	10443	10440	10436	10433	10429	10426	10422	10419
186.0	10415	10412	10408	10405	10401	10398	10395	10391	10388	10384
187.0	10381	10377	10374	10370	10367	10363	10360	10357	10353	10350
188.0	10346	10343	10339	10336	10333	10329	10326	10322	10319	10315
189.0	10312	10309	10305	10302	10298	10295	10291	10288	10285	10281
190.0	10278	10274	10271	10268	10264	10261	10257	10254	10251	10247
191.0	10244	10240	10237	10234	10230	10227	10223	10220	10217	10213
192.0	10210	10206	10203	10200	10196	10193	10190	10186	10183	10179
193.0	10176	10173	10169	10166	10163	10159	10156	10153	10149	10146
194.0	10143	10139	10136	10132	10129	10126	10122	10119	10116	10112
195.0	10109	10106	10102	10099	10096	10092	10089	10086	10082	10079
196.0	10076	10072	10069	10066	10062	10059	10056	10052	10049	10046
197.0	10043	10039	10036	10033	10029	10026	10023	10019	10016	10013
198.0	10009	10006	10003	10000	9996	9993	9990	9986	9983	9980
199.0	9977	9973	9970	9967	9963	9960	9957	9954	9950	9947
200.0	9944	9941	9937	9934	9931	9927	9924	9921	9918	9914
201.0	9911	9908	9905	9901	9898	9895	9892	9888	9885	9882
202.0	9879	9875	9872	9869	9866	9862	9859	9856	9853	9849
203.0	9846	9843	9840	9837	9833	9830	9827	9824	9820	9817
204.0	9814	9811	9808	9804	9801	9798	9795	9791	9788	9785
205.0	9782	9779	9775	9772	9769	9766	9763	9759	9756	9753
206.0	9750	9747	9743	9740	9737	9734	9731	9728	9724	9721
207.0	9718	9715	9712	9708	9705	9702	9699	9696	9693	9689
208.0	9686	9683	9680	9677	9674	9670	9667	9664	9661	9658
209.0	9655	9651	9648	9645	9642	9639	9636	9633	9629	9626
210.0	9623	9620	9617	9614	9611	9607	9604	9601	9598	9595
211.0	9592	9589	9585	9582	9579	9576	9573	9570	9567	9564
212.0	9560	9557	9554	9551	9548	9545	9542	9539	9536	9532
213.0	9529	9526	9523	9520	9517	9514	9511	9508	9504	9501
214.0	9498	9495	9492	9489	9486	9483	9480	9477	9474	9470
215.0	9467	9464	9461	9458	9455	9452	9449	9446	9443	9440
216.0	9437	9434	9431	9428	9425	9422	9419	9416	9412	9409
217.0	9406	9403	9400	9397	9394	9391	9388	9384	9381	9378
218.0	9375	9372	9369	9366	9363	9360	9357	9354	9351	9348
219.0	9345	9342	9339	9336	9333	9330	9327	9324	9321	9318



GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
220.0	9315	9312	9308	9305	9302	9299	9296	9293	9290	9287
221.0	9284	9281	9278	9275	9272	9269	9266	9263	9260	9257
222.0	9254	9251	9248	9245	9242	9239	9236	9233	9230	9227
223.0	9224	9221	9218	9215	9212	9209	9206	9203	9200	9197
224.0	9194	9191	9188	9185	9182	9179	9176	9173	9170	9167
225.0	9164	9162	9159	9156	9153	9150	9147	9144	9141	9138
226.0	9135	9132	9129	9126	9123	9120	9117	9114	9111	9108
227.0	9105	9102	9099	9096	9093	9090	9088	9085	9082	9079
228.0	9076	9073	9070	9067	9064	9061	9058	9055	9052	9049
229.0	9046	9043	9041	9038	9035	9032	9029	9026	9023	9020
230.0	9017	9014	9011	9008	9005	9003	9000	8997	8994	8991
231.0	8988	8985	8982	8979	8976	8973	8971	8968	8965	8962
232.0	8959	8956	8953	8950	8947	8944	8942	8939	8936	8933
233.0	8930	8927	8924	8921	8918	8916	8913	8910	8907	8904
234.0	8901	8898	8895	8892	8890	8887	8884	8881	8878	8875
235.0	8872	8869	8867	8864	8861	8858	8855	8852	8849	8847
236.0	8844	8841	8838	8835	8832	8829	8827	8824	8821	8818
237.0	8815	8812	8809	8807	8804	8801	8798	8795	8792	8789
238.0	8787	8784	8781	8778	8775	8772	8770	8767	8764	8761
239.0	8758	8755	8753	8750	8747	8744	8741	8738	8736	8733
240.0	8730	8727	8724	8722	8719	8716	8713	8710	8707	8705
241.0	8702	8699	8696	8693	8691	8688	8685	8682	8679	8677
242.0	8674	8671	8668	8665	8663	8660	8657	8654	8651	8649
243.0	8646	8643	8640	8637	8635	8632	8629	8626	8623	8621
244.0	8618	8615	8612	8610	8607	8604	8601	8598	8596	8593
245.0	8590	8587	8585	8582	8579	8576	8573	8571	8568	8565
246.0	8562	8560	8557	8554	8551	8549	8546	8543	8540	8538
247.0	8535	8532	8529	8526	8524	8521	8518	8515	8513	8510
248.0	8507	8504	8502	8499	8496	8493	8491	8488	8485	8483
249.0	8480	8477	8474	8472	8469	8466	8463	8461	8458	8455
250.0	8452	8450	8447	8444	8442	8439	8436	8433	8431	8428
251.0	8425	8422	8420	8417	8414	8412	8409	8406	8403	8401
252.0	8398	8395	8393	8390	8387	8384	8382	8379	8376	8374
253.0	8371	8368	8366	8363	8360	8357	8355	8352	8349	8347
254.0	8344	8341	8339	8336	8333	8330	8328	8325	8322	8320
255.0	8317	8314	8312	8309	8306	8304	8301	8298	8296	8293
256.0	8290	8287	8285	8282	8279	8277	8274	8271	8269	8266
257.0	8263	8261	8258	8255	8253	8250	8247	8245	8242	8239
258.0	8237	8234	8231	8229	8226	8223	8221	8218	8215	8213
259.0	8210	8208	8205	8202	8200	8197	8194	8192	8189	8186
260.0	8184	8181	8178	8176	8173	8170	8168	8165	8163	8160
261.0	8157	8155	8152	8149	8147	8144	8141	8139	8136	8134
262.0	8131	8128	8126	8123	8120	8118	8115	8113	8110	8107
263.0	8105	8102	8099	8097	8094	8092	8089	8086	8084	8081
264.0	8079	8076	8073	8071	8068	8065	8063	8060	8058	8055
265.0	8052	8050	8047	8045	8042	8039	8037	8034	8032	8029
266.0	8026	8024	8021	8019	8016	8013	8011	8008	8006	8003
267.0	8001	7998	7995	7993	7990	7988	7985	7982	7980	7977
268.0	7975	7972	7970	7967	7964	7962	7959	7957	7954	7951
269.0	7949	7946	7944	7941	7939	7936	7933	7931	7928	7926
270.0	7923	7921	7918	7916	7913	7910	7908	7905	7903	7900
271.0	7898	7895	7892	7890	7887	7885	7882	7880	7877	7875
272.0	7872	7869	7867	7864	7862	7859	7857	7854	7852	7849
273.0	7847	7844	7841	7839	7836	7834	7831	7829	7826	7824
274.0	7821	7819	7816	7814	7811	7809	7806	7803	7801	7798
275.0	7793	7791	7788	7786	7783	7781	7778	7776	7773	7771
276.0	7768	7766	7763	7761	7758	7756	7753	7751	7748	7746
277.0	7745	7743	7740	7738	7735	7733	7730	7728	7725	7723
278.0	7720	7718	7715	7713	7710	7708	7705	7703	7700	7698
279.0	7695	7693	7690	7688	7685	7683	7680	7678	7675	7673
280.0	7670	7668	7665	7663	7660	7658	7655	7653	7651	7648
281.0	7646	7643	7641	7638	7636	7633	7631	7628	7626	7623
282.0	7621	7618	7616	7613	7611	7608	7606	7603	7601	7598
283.0	7596	7594	7591	7589	7586	7584	7581	7579	7576	7574
284.0	7571	7569	7566	7564	7561	7559	7557	7554	7552	7549
285.0	7547	7544	7542	7539	7537	7534	7532	7530	7527	7525
286.0	7522	7520	7517	7515	7512	7510	7508	7505	7503	7500
287.0	7498	7495	7493	7490	7488	7486	7483	7481	7478	7476
288.0	7473	7471	7469	7466	7464	7461	7459	7456	7454	7452
289.0	7449	7447	7444	7442	7439	7437	7435	7432	7430	7427
290.0	7425	7422	7420	7418	7415	7413	7410	7408	7405	7403
291.0	7401	7398	7396	7393	7391	7389	7386	7384	7381	7379
292.0	7377	7374	7372	7369	7367	7365	7362	7360	7357	7355
293.0	7352	7350	7348	7345	7343	7340	7338	7336	7333	7331
294.0	7329	7326	7324	7321	7319	7317	7314	7312	7309	7307
295.0	7305	7302	7300	7297	7295	7293	7290	7288	7286	7283
296.0	7281	7278	7276	7274	7271	7269	7266	7264	7262	7259
297.0	7257	7255	7252	7250	7247	7245	7243	7240	7238	7236
298.0	7233	7231	7229	7226	7224	7221	7219	7217	7214	7212
299.0	7210	7207	7205	7203	7200	7198	7195	7193	7191	7188
300.0	7186	7184	7181	7179	7177	7174	7172	7170	7167	7165
301.0	7162	7160	7158	7155	7153	7151	7148	7146	7144	7141
302.0	7139	7137	7134	7132	7130	7127	7125	7123	7120	7118
303.0	7116	7113	7111	7109	7106	7104	7102	7099	7097	7095
304.0	7092	7090	7088	7085	7083	7081	7078	7076	7074	7071
305.0	7069	7067	7064	7062	7060	7057	7055	7053	7050	7048
306.0	7046	7043	7041	7039	7037	7034	7032	7030	7027	7025
307.0	7023	7020	7018	7016	7013	7011	7009	7006	7004	7002
308.0	7000	6997	6995	6993	6990	6988	6986	6983	6981	6979
309.0	6977	6974	6972	6970	6967	6965	6963	6960	6958	6956
310.0	6954	6951	6949	6947	6944	6942	6940	6938	6935	6933
311.0	6931	6928	6926	6924	6921	6919	6917	6915	6912	6910
312.0	6908	6906	6903	6901	6899	6896	6894	6892	6890	6887
313.0	6885	6883	6880	6878	6876	6874	6871	6869	6867	6865
314.0	6862	6860	6858	6855	6853	6851	6849	6846	6844	6842
315.0	6840	6837	6835	6833	6831	6828	6826	6824	6821	6819
316.0	6817	6815	6812	6810	6808	6806	6803	6801	6799	6797
317.0	6794	6792	6790	6788	6785	6783	6781	6779	6776	6774
318.0	6772	6770	6767	6765	6763	6761	6758	6756	6754	6752
319.0	6749	6747	6745	6743	6741	6738	6736	6734	6732	6729

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
320.0	6727	6725	6723	6720	6718	6716	6714	6711	6709	6707
321.0	6705	6703	6700	6698	6696	6694	6691	6689	6687	6685
322.0	6682	6680	6678	6676	6674	6671	6669	6667	6665	6662
323.0	6660	6658	6656	6654	6651	6649	6647	6645	6643	6640
324.0	6638	6636	6634	6631	6629	6627	6625	6623	6620	6618
325.0	6616	6614	6612	6609	6607	6605	6603	6601	6598	6596
326.0	6594	6592	6590	6587	6585	6583	6581	6579	6576	6574
327.0	6572	6570	6568	6565	6563	6561	6559	6557	6554	6552
328.0	6550	6548	6546	6543	6541	6539	6537	6535	6532	6530
329.0	6528	6526	6524	6522	6519	6517	6515	6513	6511	6508
330.0	6506	6504	6502	6500	6498	6495	6493	6491	6489	6487
331.0	6484	6482	6480	6478	6476	6474	6471	6469	6467	6465
332.0	6463	6461	6458	6456	6454	6452	6450	6448	6445	6443
333.0	6441	6439	6437	6435	6432	6430	6428	6426	6424	6422
334.0	6419	6417	6415	6413	6411	6409	6407	6404	6402	6400
335.0	6398	6396	6394	6391	6389	6387	6385	6383	6381	6379
336.0	6376	6374	6372	6370	6368	6366	6364	6361	6359	6357
337.0	6355	6353	6351	6348	6346	6344	6342	6340	6338	6336
338.0	6334	6331	6329	6327	6325	6323	6321	6319	6316	6314
339.0	6312	6310	6308	6306	6304	6301	6299	6297	6295	6293
340.0	6291	6289	6287	6284	6282	6280	6278	6276	6274	6272
341.0	6270	6267	6265	6263	6261	6259	6257	6255	6253	6250
342.0	6248	6246	6244	6242	6240	6238	6236	6234	6231	6229
343.0	6227	6225	6223	6221	6219	6217	6215	6212	6210	6208
344.0	6206	6204	6202	6200	6198	6196	6193	6191	6189	6187
345.0	6185	6183	6181	6179	6177	6175	6172	6170	6168	6166
346.0	6164	6162	6160	6158	6156	6154	6151	6149	6147	6145
347.0	6143	6141	6139	6137	6135	6133	6130	6128	6126	6124
348.0	6122	6120	6118	6116	6114	6112	6110	6108	6105	6103
349.0	6101	6099	6097	6095	6093	6091	6089	6087	6085	6083
350.0	6080	6078	6076	6074	6072	6070	6068	6066	6064	6062
351.0	6060	6058	6056	6053	6051	6049	6047	6045	6043	6041
352.0	6039	6037	6035	6033	6031	6029	6027	6024	6022	6020
353.0	6018	6016	6014	6012	6010	6008	6006	6004	6002	6000
354.0	5998	5996	5994	5991	5989	5987	5985	5983	5981	5979
355.0	5977	5975	5973	5971	5969	5967	5965	5963	5961	5959
356.0	5957	5954	5952	5950	5948	5946	5944	5942	5940	5938
357.0	5936	5934	5932	5930	5928	5926	5924	5922	5920	5918
358.0	5916	5914	5912	5910	5907	5905	5903	5901	5899	5897
359.0	5895	5893	5891	5889	5887	5885	5883	5881	5879	5877
360.0	5875	5873	5871	5869	5867	5865	5863	5861	5859	5857
361.0	5855	5853	5851	5848	5846	5844	5842	5840	5838	5836
362.0	5834	5832	5830	5828	5826	5824	5822	5820	5818	5816
363.0	5814	5812	5810	5808	5806	5804	5802	5800	5798	5796
364.0	5794	5792	5790	5788	5786	5784	5782	5780	5778	5776
365.0	5774	5772	5770	5768	5766	5764	5762	5760	5758	5756
366.0	5754	5752	5750	5748	5746	5744	5742	5740	5738	5736
367.0	5734	5732	5730	5728	5726	5724	5722	5720	5718	5716
368.0	5714	5712	5710	5708	5706	5704	5702	5700	5698	5696
369.0	5694	5692	5690	5688	5686	5684	5682	5680	5678	5676
370.0	5674	5672	5670	5668	5666	5664	5662	5660	5658	5656
371.0	5654	5652	5650	5648	5646	5644	5642	5640	5638	5636
372.0	5634	5632	5630	5628	5626	5624	5622	5620	5618	5616
373.0	5614	5612	5610	5609	5607	5605	5603	5601	5599	5597
374.0	5595	5593	5591	5589	5587	5585	5583	5581	5579	5577
375.0	5575	5573	5571	5569	5567	5565	5563	5561	5559	5557
376.0	5555	5553	5551	5550	5548	5546	5544	5542	5540	5538
377.0	5536	5534	5532	5530	5528	5526	5524	5522	5520	5518
378.0	5516	5514	5512	5510	5508	5506	5505	5503	5501	5499
379.0	5497	5495	5493	5491	5489	5487	5485	5483	5481	5479
380.0	5477	5475	5473	5471	5469	5468	5466	5464	5462	5460
381.0	5458	5456	5454	5452	5450	5448	5446	5444	5442	5440
382.0	5438	5436	5435	5433	5431	5429	5427	5425	5423	5421
383.0	5419	5417	5415	5413	5411	5409	5407	5406	5404	5402
384.0	5400	5398	5396	5394	5392	5390	5388	5386	5384	5382
385.0	5380	5379	5377	5375	5373	5371	5369	5367	5365	5363
386.0	5361	5359	5357	5356	5354	5352	5350	5348	5346	5344
387.0	5342	5340	5338	5336	5334	5332	5331	5329	5327	5325
388.0	5323	5321	5319	5317	5315	5313	5311	5310	5308	5306
389.0	5304	5302	5300	5298	5296	5294	5292	5290	5289	5287
390.0	5285	5283	5281	5279	5277	5275	5273	5271	5270	5268
391.0	5266	5264	5262	5260	5258	5256	5254	5252	5251	5249
392.0	5247	5245	5243	5241	5239	5237	5235	5233	5232	5230
393.0	5228	5226	5224	5222	5220	5218	5216	5215	5213	5211
394.0	5209	5207	5205	5203	5201	5199	5198	5196	5194	5192
395.0	5190	5188	5186	5184	5182	5181	5179	5177	5175	5173
396.0	5171	5169	5167	5166	5164	5162	5160	5158	5156	5154
397.0	5152	5150	5149	5147	5145	5143	5141	5139	5137	5135
398.0	5134	5132	5130	5128	5126	5124	5122	5121	5119	5117
399.0	5115	5113	5111	5109	5107	5106	5104	5102	5100	5098
400.0	5096	5094	5092	5091	5089	5087	5085	5083	5081	5079
401.0	5078	5076	5074	5072	5070	5068	5066	5065	5063	5061
402.0	5059	5057	5055	5053	5052	5050	5048	5046	5044	5042
403.0	5040	5039	5037	5035	5033	5031	5029	5027	5026	5024
404.0	5022	5020	5018	5016	5014	5013	5011	5009	5007	5005
405.0	5003	5002	5000	4998	4996	4994	4992	4990	4989	4987
406.0	4985	4983	4981	4979	4978	4976	4974	4972	4970	4968
407.0	4966	4965	4963	4961	4959	4957	4955	4954	4952	4950
408.0	4948	4946	4944	4943	4941	4939	4937	4935	4933	4932
409.0	4930	4928	4926	4924	4922	4921	4919	4917	4915	4913
410.0	4911	4910	4908	4906	4904	4902	4900	4899	4897	4895
411.0	4893	4891	4890	4888	4886	4884	4882	4880	4879	4877
412.0	4875	4873	4871	4869	4868	4866	4864	4862	4860	4859
413.0	4857	4855	4853	4851	4849	4848	4846	4844	4842	4840
414.0	4839	4837	4835	4833	4831	4829	4828	4826	4824	4822
415.0	4820	4819	4817	4815	4813	4811	4810	4808	4806	4804
416.0	4802	4801	4799	4797	4795	4793	4791	4790	4788	4786
417.0	4784	4782	4781	4779	4777	4775	4773	4772	4770	4768
418.0	4766	4764	4763	4761	4759	4757	4755	4754	4752	4750
419.0	4748	4746	4745	4743	4741	4739	4737	4736	4734	4732

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
420.0	4730	4729	4727	4725	4723	4721	4720	4718	4716	4714
421.0	4712	4711	4709	4707	4705	4703	4702	4700	4698	4696
422.0	4694	4693	4691	4689	4687	4686	4684	4682	4680	4678
423.0	4677	4675	4673	4671	4670	4668	4666	4664	4662	4661
424.0	4659	4657	4655	4653	4652	4650	4648	4646	4645	4643
425.0	4641	4639	4637	4636	4634	4632	4630	4629	4627	4625
426.0	4623	4622	4620	4618	4616	4614	4613	4611	4609	4607
427.0	4606	4604	4602	4600	4598	4597	4595	4593	4591	4590
428.0	4588	4586	4584	4583	4581	4579	4577	4576	4574	4572
429.0	4570	4568	4567	4565	4563	4561	4560	4558	4556	4554
430.0	4553	4551	4549	4547	4546	4544	4542	4540	4539	4537
431.0	4535	4532	4530	4528	4526	4524	4522	4520	4519	4517
432.0	4517	4516	4514	4512	4510	4509	4507	4505	4503	4502
433.0	4500	4498	4496	4495	4493	4491	4489	4488	4486	4484
434.0	4482	4481	4479	4477	4475	4474	4472	4470	4469	4467
435.0	4465	4463	4462	4460	4458	4456	4455	4453	4451	4449
436.0	4448	4446	4444	4442	4441	4439	4437	4435	4434	4432
437.0	4430	4428	4427	4425	4423	4422	4420	4418	4416	4415
438.0	4413	4411	4409	4408	4406	4404	4402	4401	4399	4397
439.0	4396	4394	4392	4390	4389	4387	4385	4383	4382	4380
440.0	4378	4377	4375	4373	4371	4370	4368	4366	4364	4363
441.0	4361	4359	4358	4356	4354	4352	4351	4349	4347	4345
442.0	4344	4342	4340	4339	4337	4335	4333	4332	4330	4328
443.0	4327	4325	4323	4321	4320	4318	4316	4315	4313	4311
444.0	4309	4308	4306	4304	4303	4301	4299	4297	4296	4294
445.0	4292	4291	4289	4287	4285	4284	4282	4280	4279	4277
446.0	4275	4273	4272	4270	4268	4267	4265	4263	4261	4260
447.0	4258	4256	4255	4253	4251	4250	4248	4246	4244	4243
448.0	4241	4239	4238	4236	4234	4233	4231	4229	4227	4226
449.0	4224	4222	4221	4219	4217	4216	4214	4212	4210	4209
450.0	4207	4205	4204	4202	4200	4199	4197	4195	4193	4192
451.0	4190	4188	4187	4185	4183	4182	4180	4178	4177	4175
452.0	4173	4171	4170	4168	4166	4165	4163	4161	4160	4158
453.0	4156	4155	4153	4151	4150	4148	4146	4144	4143	4141
454.0	4139	4138	4136	4134	4133	4131	4129	4128	4126	4124
455.0	4123	4121	4119	4118	4116	4114	4113	4111	4109	4107
456.0	4106	4104	4102	4101	4099	4097	4096	4094	4092	4091
457.0	4089	4087	4086	4084	4082	4081	4079	4077	4076	4074
458.0	4072	4071	4069	4067	4066	4064	4062	4061	4059	4057
459.0	4056	4054	4052	4051	4049	4047	4046	4044	4042	4041
460.0	4039	4037	4036	4034	4032	4031	4029	4027	4026	4024
461.0	4022	4021	4019	4017	4016	4014	4012	4011	4009	4007
462.0	4006	4004	4002	4001	3999	3997	3996	3994	3992	3991
463.0	3989	3987	3986	3984	3982	3981	3979	3977	3976	3974
464.0	3972	3971	3969	3968	3966	3964	3963	3961	3959	3958
465.0	3956	3954	3953	3951	3949	3948	3946	3944	3943	3941
466.0	3939	3938	3936	3934	3933	3931	3930	3928	3926	3925
467.0	3923	3921	3920	3918	3916	3915	3913	3911	3910	3908
468.0	3907	3905	3903	3902	3900	3898	3897	3895	3893	3892
469.0	3890	3888	3887	3885	3884	3882	3880	3879	3877	3875
470.0	3874	3872	3870	3869	3867	3866	3864	3862	3861	3859
471.0	3857	3856	3854	3852	3851	3849	3848	3846	3844	3843
472.0	3841	3839	3838	3836	3834	3833	3831	3830	3828	3826
473.0	3825	3823	3821	3820	3818	3817	3815	3813	3812	3810
474.0	3808	3807	3805	3804	3802	3800	3799	3797	3795	3794
475.0	3792	3791	3789	3787	3786	3784	3782	3781	3779	3778
476.0	3776	3774	3773	3771	3769	3768	3766	3765	3763	3761
477.0	3760	3758	3757	3755	3753	3752	3750	3748	3747	3745
478.0	3744	3742	3740	3739	3737	3735	3734	3732	3731	3729
479.0	3727	3726	3724	3723	3721	3719	3718	3716	3715	3713
480.0	3711	3710	3708	3706	3705	3703	3702	3700	3698	3697
481.0	3695	3694	3692	3690	3689	3687	3686	3684	3682	3681
482.0	3679	3678	3676	3674	3673	3671	3670	3668	3666	3665
483.0	3663	3662	3660	3658	3657	3655	3654	3652	3650	3649
484.0	3647	3646	3644	3642	3641	3639	3638	3636	3634	3633
485.0	3631	3630	3628	3626	3625	3623	3622	3620	3618	3617
486.0	3615	3614	3612	3610	3609	3607	3606	3604	3602	3601
487.0	3599	3598	3596	3594	3593	3591	3590	3588	3587	3585
488.0	3583	3582	3580	3579	3577	3575	3574	3572	3571	3569
489.0	3567	3566	3564	3563	3561	3560	3558	3556	3555	3553
490.0	3552	3550	3548	3547	3545	3544	3542	3541	3539	3537
491.0	3536	3534	3533	3531	3530	3528	3526	3525	3523	3522
492.0	3520	3518	3517	3515	3514	3512	3511	3509	3507	3506
493.0	3504	3503	3501	3500	3498	3496	3495	3493	3492	3490
494.0	3489	3487	3485	3484	3482	3481	3479	3478	3476	3474
495.0	3473	3471	3470	3468	3467	3465	3463	3462	3460	3459
496.0	3457	3456	3454	3452	3451	3449	3448	3446	3445	3443
497.0	3441	3440	3438	3437	3435	3434	3432	3430	3429	3427
498.0	3426	3424	3423	3421	3420	3418	3416	3415	3413	3412
499.0	3410	3409	3407	3406	3404	3402	3401	3399	3398	3396
500.0	3395	3393	3391	3390	3388	3387	3385	3384	3382	3381
501.0	3379	3377	3376	3374	3373	3371	3370	3368	3367	3365
502.0	3363	3362	3360	3359	3357	3356	3354	3353	3351	3350
503.0	3348	3346	3345	3343	3342	3340	3339	3337	3336	3334
504.0	3332	3331	3329	3328	3326	3325	3323	3322	3320	3319
505.0	3317	3315	3314	3312	3311	3309	3308	3306	3305	3303
506.0	3302	3300	3299	3297	3295	3294	3292	3291	3289	3288
507.0	3286	3285	3283	3282	3280	3278	3277	3275	3274	3272
508.0	3271	3269	3268	3266	3265	3263	3262	3260	3258	3257
509.0	3255	3254	3252	3251	3249	3248	3246	3245	3243	3242
510.0	3240	3239	3237	3235	3234	3232	3231	3229	3228	3226
511.0	3225	3223	3222	3220	3219	3217	3216	3214	3213	3211
512.0	3209	3208	3206	3205	3203	3202	3200	3199	3197	3196
513.0	3194	3193	3191	3190	3188	3187	3185	3184	3182	3180
514.0	3179	3177	3176	3174	3173	3171	3170	3168	3167	3165
515.0	3164	3162	3161	3159	3158	3156	3155	3153	3152	3150
516.0	3149	3147	3145	3144	3142	3141	3139	3138	3136	3135
517.0	3133	3132	3130	3129	3127	3126	3124	3123	3121	3120
518.0	3118	3117	3115	3114	3112	3111	3109	3108	3106	3105
519.0	3103	3102	3100	3099	3097	3096	3094	3093	3091	3089

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
520.0	3088	3086	3085	3083	3082	3080	3079	3077	3076	3074
521.0	3073	3071	3070	3068	3067	3065	3064	3062	3061	3059
522.0	3058	3056	3055	3053	3052	3050	3049	3047	3046	3044
523.0	3043	3041	3040	3038	3037	3035	3034	3032	3031	3029
524.0	3028	3026	3025	3023	3022	3020	3019	3017	3016	3014
525.0	3013	3011	3010	3008	3007	3005	3004	3002	3001	2999
526.0	2998	2996	2995	2993	2992	2990	2989	2987	2986	2984
527.0	2983	2981	2980	2978	2977	2975	2974	2972	2971	2969
528.0	2968	2967	2965	2964	2962	2961	2959	2958	2956	2955
529.0	2953	2952	2950	2949	2947	2946	2944	2943	2941	2940
530.0	2938	2937	2935	2934	2932	2931	2929	2928	2926	2925
531.0	2923	2922	2920	2919	2917	2916	2914	2913	2912	2910
532.0	2908	2907	2906	2904	2903	2901	2900	2898	2897	2895
533.0	2893	2892	2891	2889	2888	2886	2885	2883	2882	2880
534.0	2878	2878	2876	2875	2873	2872	2870	2869	2867	2866
535.0	2863	2863	2861	2860	2858	2857	2855	2854	2852	2851
536.0	2848	2848	2847	2845	2844	2842	2841	2839	2838	2836
537.0	2833	2833	2832	2830	2829	2827	2826	2824	2823	2822
538.0	2818	2819	2817	2816	2814	2813	2811	2810	2808	2807
539.0	2803	2804	2802	2801	2800	2798	2797	2795	2794	2792
540.0	2791	2789	2788	2786	2785	2783	2782	2781	2779	2778
541.0	2776	2775	2773	2772	2770	2769	2767	2766	2764	2763
542.0	2762	2760	2759	2757	2756	2754	2753	2751	2750	2748
543.0	2747	2746	2744	2743	2741	2740	2738	2737	2735	2734
544.0	2732	2731	2729	2728	2727	2725	2724	2722	2721	2719
545.0	2718	2716	2715	2714	2712	2711	2709	2708	2706	2705
546.0	2703	2702	2700	2699	2698	2696	2695	2693	2692	2690
547.0	2689	2687	2686	2685	2683	2682	2680	2679	2677	2676
548.0	2674	2673	2671	2670	2669	2667	2666	2664	2663	2661
549.0	2660	2658	2657	2656	2654	2653	2651	2650	2648	2647
550.0	2645	2644	2643	2641	2640	2638	2637	2635	2634	2633
551.0	2631	2630	2628	2627	2625	2624	2622	2621	2620	2618
552.0	2617	2615	2614	2612	2611	2610	2608	2607	2605	2604
553.0	2602	2601	2599	2598	2597	2595	2594	2592	2591	2589
554.0	2588	2587	2585	2584	2582	2581	2579	2578	2577	2575
555.0	2574	2572	2571	2569	2568	2567	2565	2564	2562	2561
556.0	2559	2558	2556	2555	2554	2552	2551	2549	2548	2546
557.0	2545	2544	2542	2541	2539	2538	2537	2535	2534	2532
558.0	2531	2529	2528	2527	2525	2524	2522	2521	2519	2518
559.0	2517	2515	2514	2512	2511	2509	2508	2507	2505	2504
560.0	2502	2501	2499	2498	2497	2495	2494	2492	2491	2490
561.0	2488	2487	2485	2484	2482	2481	2480	2478	2477	2475
562.0	2474	2473	2471	2470	2468	2467	2465	2464	2463	2461
563.0	2460	2458	2457	2456	2454	2453	2451	2450	2448	2447
564.0	2446	2444	2443	2441	2440	2439	2437	2436	2434	2433
565.0	2432	2430	2429	2427	2426	2424	2423	2422	2420	2419
566.0	2417	2416	2415	2413	2412	2410	2409	2408	2406	2405
567.0	2403	2402	2401	2399	2398	2396	2395	2394	2392	2391
568.0	2389	2388	2386	2385	2384	2382	2381	2379	2378	2377
569.0	2375	2374	2372	2371	2370	2368	2367	2365	2364	2363
570.0	2361	2360	2358	2357	2356	2354	2353	2351	2350	2349
571.0	2347	2346	2344	2343	2342	2340	2339	2337	2336	2335
572.0	2333	2332	2330	2329	2328	2326	2325	2323	2322	2321
573.0	2319	2318	2317	2315	2314	2312	2311	2310	2308	2307
574.0	2305	2304	2303	2301	2300	2298	2297	2296	2294	2293
575.0	2291	2290	2289	2287	2286	2284	2283	2282	2280	2279
576.0	2278	2276	2275	2273	2272	2271	2269	2268	2266	2265
577.0	2264	2262	2261	2260	2258	2257	2255	2254	2253	2251
578.0	2250	2248	2247	2246	2244	2243	2241	2240	2239	2237
579.0	2236	2235	2233	2232	2230	2229	2228	2226	2225	2224
580.0	2222	2221	2219	2218	2217	2215	2214	2212	2211	2210
581.0	2208	2207	2206	2204	2203	2201	2200	2199	2197	2196
582.0	2195	2193	2192	2190	2189	2188	2186	2185	2184	2182
583.0	2181	2179	2178	2177	2175	2174	2173	2171	2170	2168
584.0	2167	2166	2164	2163	2162	2160	2159	2157	2156	2155
585.0	2153	2152	2151	2149	2148	2146	2145	2144	2142	2141
586.0	2140	2138	2137	2135	2134	2133	2131	2130	2129	2127
587.0	2126	2125	2123	2122	2120	2119	2118	2116	2115	2114
588.0	2112	2111	2110	2108	2107	2105	2104	2103	2101	2100
589.0	2099	2097	2096	2094	2093	2092	2090	2089	2088	2086
590.0	2085	2084	2082	2081	2080	2078	2077	2075	2074	2073
591.0	2071	2070	2069	2067	2066	2065	2063	2062	2060	2059
592.0	2058	2056	2055	2054	2052	2051	2050	2048	2047	2046
593.0	2044	2043	2041	2040	2039	2037	2036	2035	2033	2032
594.0	2031	2029	2028	2027	2025	2024	2022	2021	2020	2018
595.0	2017	2016	2014	2013	2012	2010	2009	2008	2006	2005
596.0	2004	2002	2001	1999	1998	1997	1995	1994	1993	1991
597.0	1990	1989	1987	1986	1985	1983	1982	1981	1979	1978
598.0	1977	1975	1974	1973	1971	1970	1968	1967	1966	1964
599.0	1963	1962	1960	1959	1958	1956	1955	1954	1952	1951
600.0	1950	1948	1947	1946	1944	1943	1942	1940	1939	1938
601.0	1936	1935	1934	1932	1931	1930	1928	1927	1925	1924
602.0	1923	1921	1920	1919	1917	1916	1915	1913	1912	1911
603.0	1909	1908	1907	1905	1904	1903	1901	1900	1899	1897
604.0	1896	1895	1893	1892	1891	1889	1888	1887	1885	1884
605.0	1883	1881	1880	1879	1877	1876	1875	1873	1872	1871
606.0	1869	1868	1867	1865	1864	1863	1861	1860	1859	1857
607.0	1856	1855	1853	1852	1851	1849	1848	1847	1845	1844
608.0	1843	1841	1840	1839	1837	1836	1835	1833	1832	1831
609.0	1829	1828	1827	1825	1824	1823	1821	1820	1819	1817
610.0	1816	1815	1814	1812	1811	1810	1808	1807	1806	1804
611.0	1803	1802	1800	1799	1798	1796	1795	1794	1792	1791
612.0	1790	1788	1787	1786	1784	1783	1782	1780	1779	1778
613.0	1776	1775	1774	1772	1771	1770	1769	1767	1766	1765
614.0	1763	1762	1761	1759	1758	1757	1755	1754	1753	1751
615.0	1750	1749	1747	1746	1745	1743	1742	1741	1740	1738
616.0	1737	1736	1734	1733	1732	1730	1729	1728	1726	1725
617.0	1724	1722	1721	1720	1719	1717	1716	1715	1713	1712
618.0	1711	1709	1708	1707	1705	1704	1703	1701	1700	1699
619.0	1698	1696	1695	1694	1692	1691	1690	1688	1687	1686

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
620.0	1684	1683	1682	1680	1679	1678	1677	1675	1674	1673
621.0	1671	1670	1669	1667	1666	1665	1664	1662	1661	1660
622.0	1658	1657	1656	1654	1653	1652	1650	1649	1648	1647
623.0	1645	1644	1643	1641	1640	1639	1637	1636	1635	1634
624.0	1632	1631	1630	1628	1627	1626	1624	1623	1622	1620
625.0	1619	1618	1617	1615	1614	1613	1611	1610	1609	1608
626.0	1606	1605	1604	1602	1601	1600	1598	1597	1596	1595
627.0	1593	1592	1591	1589	1588	1587	1585	1584	1583	1582
628.0	1580	1579	1578	1576	1575	1574	1572	1571	1570	1569
629.0	1567	1566	1565	1563	1562	1561	1560	1558	1557	1556
630.0	1554	1553	1552	1551	1549	1548	1547	1545	1544	1543
631.0	1541	1540	1539	1538	1536	1535	1534	1532	1531	1530
632.0	1529	1527	1526	1525	1523	1522	1521	1520	1518	1517
633.0	1516	1514	1513	1512	1511	1509	1508	1507	1505	1504
634.0	1503	1502	1500	1499	1498	1496	1495	1494	1493	1491
635.0	1490	1489	1487	1486	1485	1484	1482	1481	1480	1478
636.0	1477	1476	1475	1473	1472	1471	1469	1468	1467	1466
637.0	1464	1463	1462	1461	1459	1458	1457	1455	1454	1453
638.0	1452	1450	1449	1448	1446	1445	1444	1443	1441	1440
639.0	1439	1438	1436	1435	1434	1432	1431	1430	1429	1427
640.0	1426	1425	1423	1422	1421	1420	1418	1417	1416	1415
641.0	1413	1412	1411	1409	1408	1407	1406	1404	1403	1402
642.0	1401	1399	1398	1397	1395	1394	1393	1392	1390	1389
643.0	1388	1387	1385	1384	1383	1381	1380	1379	1378	1376
644.0	1375	1374	1373	1371	1370	1369	1368	1366	1365	1364
645.0	1362	1361	1360	1359	1357	1356	1355	1354	1352	1351
646.0	1350	1349	1347	1346	1345	1343	1342	1341	1340	1338
647.0	1337	1336	1335	1333	1332	1331	1330	1328	1327	1326
648.0	1325	1323	1322	1321	1319	1318	1317	1316	1314	1313
649.0	1312	1311	1309	1308	1307	1306	1304	1303	1302	1301
650.0	1299	1298	1297	1296	1294	1293	1292	1290	1289	1288
651.0	1287	1285	1284	1283	1282	1280	1279	1278	1277	1275
652.0	1274	1273	1272	1270	1269	1268	1267	1265	1264	1263
653.0	1262	1260	1259	1258	1257	1255	1254	1253	1252	1250
654.0	1249	1248	1247	1245	1244	1243	1242	1240	1239	1238
655.0	1236	1235	1234	1233	1231	1230	1229	1228	1226	1225
656.0	1224	1223	1221	1220	1219	1218	1216	1215	1214	1213
657.0	1211	1210	1209	1208	1206	1205	1204	1203	1202	1200
658.0	1199	1198	1197	1195	1194	1193	1192	1190	1189	1188
659.0	1187	1185	1184	1183	1182	1180	1179	1178	1177	1175
660.0	1174	1173	1172	1170	1169	1168	1167	1165	1164	1163
661.0	1162	1160	1159	1158	1157	1155	1154	1153	1152	1150
662.0	1149	1148	1147	1146	1144	1143	1142	1141	1139	1138
663.0	1137	1136	1134	1133	1132	1131	1129	1128	1127	1126
664.0	1124	1123	1122	1121	1120	1118	1117	1116	1115	1113
665.0	1112	1111	1110	1108	1107	1106	1105	1103	1102	1101
666.0	1100	1098	1097	1096	1095	1094	1092	1091	1090	1089
667.0	1087	1086	1085	1084	1082	1081	1080	1079	1078	1076
668.0	1075	1074	1073	1071	1070	1069	1068	1066	1065	1064
669.0	1063	1062	1060	1059	1058	1057	1055	1054	1053	1052
670.0	1050	1049	1048	1047	1046	1044	1043	1042	1041	1039
671.0	1038	1037	1036	1034	1033	1032	1031	1030	1028	1027
672.0	1026	1025	1023	1022	1021	1020	1019	1017	1016	1015
673.0	1014	1012	1011	1010	1009	1008	1006	1005	1004	1003
674.0	1001	1000	999	998	997	995	994	993	992	990
675.0	989	988	987	986	984	983	982	981	979	978
676.0	977	976	975	973	972	971	970	968	967	966
677.0	965	964	962	961	960	959	957	956	955	954
678.0	953	951	950	949	948	947	945	944	943	942
679.0	940	939	938	937	936	934	933	932	931	929
680.0	928	927	926	925	923	922	921	920	919	917
681.0	916	915	914	912	911	910	909	908	906	905
682.0	904	903	902	900	899	898	897	896	894	893
683.0	892	891	889	888	887	886	885	883	882	881
684.0	880	879	877	876	875	874	873	871	870	869
685.0	868	867	865	864	863	862	860	859	858	857
686.0	866	864	863	862	861	860	858	857	856	855
687.0	864	862	861	860	859	858	856	855	854	853
688.0	862	860	859	858	857	856	854	853	852	851
689.0	860	858	857	856	855	854	852	851	850	849
690.0	808	806	805	804	803	802	800	799	798	797
691.0	796	794	793	792	791	790	788	787	786	785
692.0	784	782	781	780	779	778	776	775	774	773
693.0	772	770	769	768	767	766	764	763	762	761
694.0	760	758	757	756	755	754	752	751	750	749
695.0	748	747	745	744	743	742	741	739	738	737
696.0	736	735	733	732	731	730	729	727	726	725
697.0	724	723	722	720	719	718	717	716	714	713
698.0	712	711	710	708	707	706	705	704	702	701
699.0	700	699	698	697	695	694	693	692	691	689
700.0	688	687	686	685	683	682	681	680	679	678
701.0	676	675	674	673	672	670	669	668	667	666
702.0	665	663	662	661	660	659	657	656	655	654
703.0	663	662	660	659	658	657	656	655	654	653
704.0	661	660	659	657	656	655	654	653	652	651
705.0	659	658	657	656	655	654	653	652	651	650
706.0	657	656	655	654	653	652	651	650	649	648
707.0	655	654	653	652	651	650	649	648	647	646
708.0	653	652	651	650	649	648	647	646	645	644
709.0	651	650	649	648	647	646	645	644	643	642
710.0	649	648	647	646	645	644	643	642	641	640
711.0	647	646	645	644	643	642	641	640	639	638
712.0	645	644	643	642	641	640	639	638	637	636
713.0	643	642	641	640	639	638	637	636	635	634
714.0	641	640	639	638	637	636	635	634	633	632
715.0	639	638	637	636	635	634	633	632	631	630
716.0	637	636	635	634	633	632	631	630	629	628
717.0	635	634	633	632	631	630	629	628	627	626
718.0	633	632	631	630	629	628	627	626	625	624
719.0	631	630	629	628	627	626	625	624	623	622

GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
720.0	454	453	451	450	449	448	447	446	444	443
721.0	441	441	440	439	437	436	435	434	433	432
722.0	431	429	428	427	426	425	424	422	421	420
723.0	419	418	417	415	414	413	412	411	410	409
724.0	407	406	405	404	403	402	400	399	398	397
725.0	396	395	394	392	391	390	389	388	387	386
726.0	384	383	382	381	380	379	377	376	375	374
727.0	373	372	371	369	368	367	366	365	364	362
728.0	361	360	359	358	357	356	354	353	352	351
729.0	350	349	348	346	345	344	343	342	341	340
730.0	338	337	336	335	334	333	332	330	329	328
731.0	327	326	325	323	322	321	320	319	318	317
732.0	315	314	313	312	311	310	309	307	306	305
733.0	304	303	302	301	299	298	297	296	295	294
734.0	293	291	290	289	288	287	286	285	283	282
735.0	281	280	279	278	277	276	274	273	272	271
736.0	270	269	268	266	265	264	263	262	261	260
737.0	258	257	256	255	254	253	252	250	249	248
738.0	247	246	245	244	243	241	240	239	238	237
739.0	236	235	233	232	231	230	229	228	227	225
740.0	224	223	222	221	220	219	218	216	215	214
741.0	213	212	211	210	209	207	206	205	204	203
742.0	202	201	199	198	197	196	195	194	193	192
743.0	190	189	188	187	186	185	184	182	181	180
744.0	179	178	177	176	175	173	172	171	170	169
745.0	168	167	166	164	163	162	161	160	159	158
746.0	157	155	154	153	152	151	150	149	148	146
747.0	145	144	143	142	141	140	139	137	136	135
748.0	134	133	132	131	130	128	127	126	125	124
749.0	123	122	121	119	118	117	116	115	114	113
750.0	112	110	109	108	107	106	105	104	103	101
751.0	100	99	98	97	96	95	94	93	91	90
752.0	89	88	87	86	85	84	82	81	80	79
753.0	78	77	76	75	74	72	71	70	69	68
754.0	67	66	65	63	62	61	60	59	58	57
755.0	56	55	53	52	51	50	49	48	47	46
756.0	44	43	42	41	40	39	38	37	36	34
757.0	33	32	31	30	29	28	27	26	24	23
758.0	22	21	20	19	18	17	16	14	13	12
759.0	11	10	9	8	7	6	4	3	2	1
760.0	-0	-1	-2	-3	-4	-5	-7	-8	-9	-10
761.0	-11	-12	-13	-14	-16	-17	-18	-19	-20	-21
762.0	-22	-23	-24	-25	-27	-28	-29	-30	-31	-32
763.0	-33	-34	-35	-37	-38	-39	-40	-41	-42	-43
764.0	-44	-45	-47	-48	-49	-50	-51	-52	-53	-54
765.0	-55	-56	-58	-59	-60	-61	-62	-63	-64	-65
766.0	-66	-67	-69	-70	-71	-72	-73	-74	-75	-76
767.0	-77	-79	-80	-81	-82	-83	-84	-85	-86	-87
768.0	-88	-90	-91	-92	-93	-94	-95	-96	-97	-98
769.0	-99	-101	-102	-103	-104	-105	-106	-107	-108	-109
770.0	-110	-111	-113	-114	-115	-116	-117	-118	-119	-120
771.0	-121	-122	-124	-125	-126	-127	-128	-129	-130	-131
772.0	-132	-133	-135	-136	-137	-138	-139	-140	-141	-142
773.0	-143	-144	-145	-147	-148	-149	-150	-151	-152	-153
774.0	-154	-155	-156	-158	-159	-160	-161	-162	-163	-164
775.0	-165	-166	-167	-168	-170	-171	-172	-173	-174	-175
776.0	-176	-177	-178	-179	-180	-182	-183	-184	-185	-186
777.0	-187	-188	-189	-190	-191	-192	-194	-195	-196	-197
778.0	-198	-199	-200	-201	-202	-203	-204	-205	-207	-208
779.0	-209	-210	-211	-212	-213	-214	-215	-216	-217	-219
780.0	-220	-221	-222	-223	-224	-225	-226	-227	-228	-229
781.0	-230	-232	-233	-234	-235	-236	-237	-238	-239	-240
782.0	-241	-242	-244	-245	-246	-247	-248	-249	-250	-251
783.0	-252	-253	-254	-255	-257	-258	-259	-260	-261	-262
784.0	-263	-264	-265	-266	-267	-268	-270	-271	-272	-273
785.0	-274	-275	-276	-277	-278	-279	-280	-281	-282	-284
786.0	-285	-287	-288	-289	-290	-291	-292	-293	-294	-299
787.0	-295	-297	-298	-299	-300	-301	-302	-303	-304	-305
788.0	-306	-307	-308	-309	-311	-312	-313	-314	-315	-316
789.0	-317	-318	-319	-320	-321	-322	-323	-325	-326	-327
790.0	-328	-329	-330	-331	-332	-333	-334	-335	-336	-337
791.0	-338	-340	-341	-342	-343	-344	-345	-346	-347	-348
792.0	-349	-350	-351	-352	-354	-355	-356	-357	-358	-359
793.0	-360	-361	-362	-363	-364	-365	-366	-367	-369	-370
794.0	-371	-372	-373	-374	-375	-376	-377	-378	-379	-380
795.0	-381	-382	-384	-385	-386	-387	-388	-389	-390	-391
796.0	-392	-393	-394	-395	-396	-397	-398	-400	-401	-402
797.0	-403	-404	-405	-406	-407	-408	-409	-410	-411	-412
798.0	-413	-415	-416	-417	-418	-419	-420	-421	-422	-423
799.0	-424	-425	-426	-427	-428	-429	-430	-432	-433	-434
800.0	-435	-436	-437	-438	-439	-440	-441	-442	-443	-444
801.0	-445	-446	-448	-449	-450	-451	-452	-453	-454	-455
802.0	-456	-457	-458	-459	-460	-461	-462	-463	-465	-466
803.0	-467	-468	-469	-470	-471	-472	-473	-474	-475	-476
804.0	-477	-478	-479	-480	-481	-483	-484	-485	-486	-487
805.0	-488	-489	-490	-491	-492	-493	-494	-495	-496	-497
806.0	-498	-499	-501	-502	-503	-504	-505	-506	-507	-508
807.0	-509	-510	-511	-512	-513	-514	-515	-516	-517	-519
808.0	-520	-521	-522	-523	-524	-525	-526	-527	-528	-529
809.0	-530	-531	-532	-533	-534	-535	-536	-538	-539	-540
810.0	-541	-542	-543	-544	-545	-546	-547	-548	-549	-550
811.0	-551	-552	-553	-554	-555	-556	-558	-559	-560	-561
812.0	-562	-563	-564	-565	-566	-567	-568	-569	-570	-571
813.0	-572	-573	-574	-575	-576	-578	-579	-580	-581	-582
814.0	-583	-584	-585	-586	-587	-588	-589	-590	-591	-592
815.0	-593	-594	-595	-596	-597	-598	-600	-601	-602	-603
816.0	-604	-605	-606	-607	-608	-609	-610	-611	-612	-613
817.0	-614	-615	-616	-617	-618	-619	-620	-622	-623	-624
818.0	-625	-626	-627	-628	-629	-630	-631	-632	-633	-634
819.0	-635	-636	-637	-638	-639	-640	-641	-642	-643	-645



GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
820.0	-646	-647	-648	-649	-650	-651	-652	-653	-654	-655
821.0	-656	-657	-658	-659	-660	-661	-662	-663	-664	-665
822.0	-666	-667	-668	-670	-671	-672	-673	-674	-675	-676
823.0	-677	-678	-679	-680	-681	-682	-683	-684	-685	-686
824.0	-687	-688	-689	-690	-691	-692	-693	-694	-695	-697
825.0	-698	-699	-700	-701	-702	-703	-704	-705	-706	-707
826.0	-708	-709	-710	-711	-712	-713	-714	-715	-716	-717
827.0	-718	-719	-720	-721	-722	-723	-724	-725	-726	-727
828.0	-729	-730	-731	-732	-733	-734	-735	-736	-737	-738
829.0	-739	-740	-741	-742	-743	-744	-745	-746	-747	-748
830.0	-749	-750	-751	-753	-754	-755	-756	-757	-758	-759
831.0	-760	-761	-762	-763	-764	-765	-766	-767	-768	-769
832.0	-770	-771	-772	-773	-774	-775	-776	-777	-778	-779
833.0	-780	-781	-782	-783	-784	-785	-786	-787	-788	-789
834.0	-791	-792	-793	-794	-795	-796	-797	-798	-799	-800
835.0	-801	-802	-803	-804	-805	-806	-807	-808	-809	-810
836.0	-811	-812	-813	-814	-815	-816	-817	-818	-819	-820
837.0	-821	-823	-824	-825	-826	-827	-828	-829	-830	-831
838.0	-832	-833	-834	-835	-836	-837	-838	-839	-840	-841
839.0	-842	-843	-844	-845	-846	-847	-848	-849	-850	-851
840.0	-852	-853	-854	-855	-856	-857	-858	-859	-860	-861
841.0	-862	-863	-865	-866	-867	-868	-869	-870	-871	-872
842.0	-873	-874	-875	-876	-877	-878	-879	-880	-881	-882
843.0	-883	-884	-885	-886	-887	-888	-889	-890	-891	-892
844.0	-893	-894	-895	-896	-897	-898	-899	-900	-901	-902
845.0	-903	-904	-905	-906	-907	-908	-909	-910	-911	-912
846.0	-913	-914	-916	-917	-918	-919	-920	-921	-922	-923
847.0	-924	-925	-926	-927	-928	-929	-930	-931	-932	-933
848.0	-934	-935	-936	-937	-938	-939	-940	-941	-942	-943
849.0	-944	-945	-946	-947	-948	-949	-950	-951	-952	-953
850.0	-954	-955	-956	-957	-958	-959	-960	-961	-962	-963
851.0	-964	-965	-966	-967	-968	-969	-970	-971	-972	-973
852.0	-974	-975	-976	-977	-978	-979	-980	-981	-982	-983
853.0	-984	-985	-986	-987	-988	-989	-990	-991	-992	-993
854.0	-995	-996	-997	-998	-999	-1000	-1001	-1002	-1003	-1004
855.0	-1005	-1006	-1007	-1008	-1009	-1010	-1011	-1012	-1013	-1014
856.0	-1015	-1016	-1017	-1018	-1019	-1020	-1021	-1022	-1023	-1024
857.0	-1025	-1026	-1027	-1028	-1029	-1030	-1031	-1032	-1033	-1034
858.0	-1035	-1036	-1037	-1038	-1039	-1040	-1041	-1042	-1043	-1044
859.0	-1045	-1046	-1047	-1048	-1049	-1050	-1051	-1052	-1053	-1054
860.0	-1055	-1056	-1057	-1058	-1059	-1060	-1061	-1062	-1063	-1064
861.0	-1065	-1066	-1067	-1068	-1069	-1070	-1071	-1072	-1073	-1074
862.0	-1075	-1076	-1077	-1078	-1079	-1080	-1081	-1082	-1083	-1084
863.0	-1085	-1086	-1087	-1088	-1089	-1090	-1091	-1092	-1093	-1094
864.0	-1095	-1096	-1097	-1098	-1099	-1100	-1101	-1102	-1103	-1104
865.0	-1105	-1106	-1107	-1108	-1109	-1110	-1111	-1112	-1113	-1114
866.0	-1115	-1116	-1117	-1118	-1119	-1120	-1121	-1122	-1123	-1124
867.0	-1125	-1126	-1127	-1128	-1129	-1130	-1131	-1132	-1133	-1134
868.0	-1135	-1136	-1137	-1138	-1139	-1140	-1141	-1142	-1143	-1144
869.0	-1145	-1146	-1147	-1148	-1149	-1150	-1151	-1152	-1153	-1154
870.0	-1155	-1156	-1157	-1158	-1159	-1160	-1161	-1162	-1163	-1164
871.0	-1165	-1166	-1167	-1168	-1169	-1170	-1171	-1172	-1173	-1174
872.0	-1175	-1176	-1177	-1178	-1179	-1180	-1181	-1182	-1183	-1184
873.0	-1185	-1186	-1187	-1188	-1189	-1190	-1191	-1192	-1193	-1194
874.0	-1195	-1196	-1197	-1198	-1199	-1200	-1201	-1202	-1203	-1204
875.0	-1205	-1206	-1207	-1208	-1209	-1210	-1211	-1212	-1213	-1214
876.0	-1214	-1215	-1216	-1217	-1218	-1219	-1220	-1221	-1222	-1223
877.0	-1224	-1225	-1226	-1227	-1228	-1229	-1230	-1231	-1232	-1233
878.0	-1234	-1235	-1236	-1237	-1238	-1239	-1240	-1241	-1242	-1243
879.0	-1244	-1245	-1246	-1247	-1248	-1249	-1250	-1251	-1252	-1253
880.0	-1254	-1255	-1256	-1257	-1258	-1259	-1260	-1261	-1262	-1263
881.0	-1264	-1265	-1266	-1267	-1268	-1269	-1270	-1271	-1272	-1273
882.0	-1274	-1275	-1276	-1277	-1278	-1279	-1280	-1281	-1282	-1283
883.0	-1283	-1284	-1285	-1286	-1287	-1288	-1289	-1290	-1291	-1292
884.0	-1293	-1294	-1295	-1296	-1297	-1298	-1299	-1300	-1301	-1302
885.0	-1303	-1304	-1305	-1306	-1307	-1308	-1309	-1310	-1311	-1312
886.0	-1313	-1314	-1315	-1316	-1317	-1318	-1319	-1320	-1321	-1322
887.0	-1323	-1324	-1325	-1326	-1327	-1328	-1329	-1330	-1331	-1332
888.0	-1332	-1333	-1334	-1335	-1336	-1337	-1338	-1339	-1340	-1341
889.0	-1342	-1343	-1344	-1345	-1346	-1347	-1348	-1349	-1350	-1351
890.0	-1352	-1353	-1354	-1355	-1356	-1357	-1358	-1359	-1360	-1361
891.0	-1362	-1363	-1364	-1365	-1366	-1367	-1368	-1369	-1370	-1371
892.0	-1372	-1373	-1374	-1375	-1376	-1377	-1378	-1379	-1380	-1381
893.0	-1381	-1382	-1383	-1384	-1385	-1386	-1387	-1388	-1389	-1390
894.0	-1391	-1392	-1393	-1394	-1395	-1396	-1397	-1398	-1399	-1400
895.0	-1401	-1402	-1403	-1404	-1405	-1406	-1407	-1408	-1409	-1410
896.0	-1410	-1411	-1412	-1413	-1414	-1415	-1416	-1417	-1418	-1419
897.0	-1420	-1421	-1422	-1423	-1424	-1425	-1426	-1427	-1428	-1429
898.0	-1430	-1431	-1432	-1433	-1434	-1435	-1436	-1437	-1438	-1439
899.0	-1440	-1441	-1442	-1443	-1444	-1445	-1446	-1447	-1448	-1449

## GEOPOTENTIAL ALTITUDE IN METERS as a function of PRESSURE IN MILLIMETERS OF MERCURY

P, mm Hg	0	1	2	3	4	5	6	7	8	9
900.	-1449	-1459	-1469	-1478	-1488	-1498	-1507	-1517	-1526	-1536
910.	-1546	-1555	-1565	-1574	-1584	-1593	-1603	-1613	-1622	-1632
920.	-1641	-1651	-1660	-1670	-1679	-1689	-1698	-1707	-1717	-1726
930.	-1736	-1745	-1755	-1764	-1773	-1783	-1792	-1802	-1811	-1820
940.	-1830	-1839	-1848	-1858	-1867	-1876	-1886	-1895	-1904	-1913
950.	-1923	-1932	-1941	-1950	-1960	-1969	-1978	-1987	-1996	-2006
960.	-2015	-2024	-2033	-2042	-2052	-2061	-2070	-2079	-2088	-2097
970.	-2106	-2115	-2125	-2134	-2143	-2152	-2161	-2170	-2179	-2188
980.	-2197	-2206	-2215	-2224	-2233	-2242	-2251	-2260	-2269	-2278
990.	-2287	-2296	-2305	-2314	-2323	-2332	-2341	-2350	-2358	-2367
1000.	-2376	-2385	-2394	-2403	-2412	-2421	-2429	-2438	-2447	-2456
1010.	-2465	-2474	-2482	-2491	-2500	-2509	-2518	-2526	-2535	-2544
1020.	-2553	-2561	-2570	-2579	-2587	-2596	-2605	-2614	-2622	-2631
1030.	-2640	-2648	-2657	-2666	-2674	-2683	-2692	-2700	-2709	-2717
1040.	-2726	-2735	-2743	-2752	-2760	-2769	-2778	-2786	-2795	-2803
1050.	-2812	-2820	-2829	-2837	-2846	-2854	-2863	-2871	-2880	-2888
1060.	-2897	-2905	-2914	-2922	-2931	-2939	-2948	-2956	-2965	-2973
1070.	-2981	-2990	-2998	-3007	-3015	-3023	-3032	-3040	-3048	-3057
1080.	-3065	-3074	-3082	-3090	-3099	-3107	-3115	-3123	-3132	-3140
1090.	-3148	-3157	-3165	-3173	-3181	-3190	-3198	-3206	-3214	-3223
1100.	-3231	-3239	-3247	-3256	-3264	-3272	-3280	-3288	-3297	-3305
1110.	-3313	-3321	-3329	-3337	-3346	-3354	-3362	-3370	-3378	-3386
1120.	-3394	-3402	-3410	-3419	-3427	-3435	-3443	-3451	-3459	-3467
1130.	-3475	-3483	-3491	-3499	-3507	-3515	-3523	-3531	-3539	-3547
1140.	-3555	-3563	-3571	-3579	-3587	-3595	-3603	-3611	-3619	-3627
1150.	-3635	-3643	-3651	-3659	-3667	-3675	-3682	-3690	-3698	-3706
1160.	-3714	-3722	-3730	-3738	-3745	-3753	-3761	-3769	-3777	-3785
1170.	-3793	-3800	-3808	-3816	-3824	-3832	-3839	-3847	-3855	-3863
1180.	-3871	-3878	-3886	-3894	-3902	-3909	-3917	-3925	-3933	-3940
1190.	-3948	-3956	-3963	-3971	-3979	-3986	-3994	-4002	-4010	-4017
1200.	-4025	-4033	-4040	-4048	-4056	-4063	-4071	-4078	-4086	-4094
1210.	-4101	-4109	-4117	-4124	-4132	-4139	-4147	-4154	-4162	-4170
1220.	-4177	-4185	-4192	-4200	-4207	-4215	-4223	-4230	-4238	-4245
1230.	-4253	-4260	-4268	-4275	-4283	-4290	-4298	-4305	-4313	-4320
1240.	-4328	-4335	-4342	-4350	-4357	-4365	-4372	-4380	-4387	-4395
1250.	-4402	-4409	-4417	-4424	-4432	-4439	-4446	-4454	-4461	-4468
1260.	-4476	-4483	-4491	-4498	-4505	-4513	-4520	-4527	-4535	-4542
1270.	-4549	-4557	-4564	-4571	-4579	-4586	-4593	-4600	-4608	-4615
1280.	-4622	-4630	-4637	-4644	-4651	-4659	-4666	-4673	-4680	-4688
1290.	-4695	-4702	-4709	-4717	-4724	-4731	-4738	-4745	-4753	-4760
1300.	-4767	-4774	-4781	-4788	-4796	-4803	-4810	-4817	-4824	-4831
1310.	-4839	-4846	-4853	-4860	-4867	-4874	-4881	-4888	-4896	-4903
1320.	-4910	-4917	-4924	-4931	-4938	-4945	-4952	-4959	-4966	-4973
1330.	-4981	-4988	-4995							

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Table IX  
GEOPOTENTIAL ALTITUDE IN FEET AS A FUNCTION OF PRESSURE IN  
MILLIBARS

TABLE IX

GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
8.60									104987	104962
8.70	104937	104911	104886	104861	104836	104811	104786	104761	104736	104711
8.80	104686	104661	104636	104611	104586	104561	104537	104512	104487	104462
8.90	104438	104413	104389	104364	104339	104315	104290	104266	104241	104217
9.00	104193	104168	104144	104120	104095	104071	104047	104023	103999	103974
9.10	103950	103926	103902	103878	103854	103830	103806	103782	103758	103735
9.20	103711	103687	103663	103639	103616	103592	103568	103545	103521	103497
9.30	103474	103450	103427	103403	103380	103356	103333	103309	103286	103263
9.40	103239	103216	103193	103170	103146	103123	103100	103077	103054	103031
9.50	103008	102985	102962	102939	102916	102893	102870	102847	102824	102801
9.60	102778	102756	102733	102710	102687	102665	102642	102619	102597	102574
9.70	102552	102529	102506	102484	102461	102439	102417	102394	102372	102349
9.80	102327	102305	102282	102260	102238	102216	102194	102171	102149	102127
9.90	102105	102083	102061	102039	102017	101995	101973	101951	101929	101907

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
10.00	101885	101863	101841	101820	101798	101776	101754	101733	101711	101689
10.10	101668	101646	101624	101603	101581	101560	101538	101517	101495	101474
10.20	101452	101431	101409	101388	101367	101345	101324	101303	101282	101260
10.30	101239	101218	101197	101176	101154	101133	101112	101091	101070	101049
10.40	101028	101007	100986	100965	100944	100923	100902	100882	100861	100840
10.50	100819	100798	100777	100757	100736	100715	100695	100674	100653	100633
10.60	100612	100591	100571	100550	100530	100509	100489	100468	100448	100428
10.70	100407	100387	100366	100346	100326	100305	100285	100265	100245	100224
10.80	100204	100184	100164	100144	100123	100103	100083	100063	100043	100023
10.90	100003	99983	99963	99943	99923	99903	99883	99863	99844	99824
11.00	99804	99784	99764	99745	99725	99705	99685	99666	99646	99626
11.10	99607	99587	99567	99548	99528	99509	99489	99470	99450	99431
11.20	99411	99392	99372	99353	99333	99314	99295	99275	99256	99237
11.30	99217	99198	99179	99160	99140	99121	99102	99083	99064	99045
11.40	99025	99006	98987	98968	98949	98930	98911	98892	98873	98854
11.50	98835	98816	98797	98778	98760	98741	98722	98703	98684	98665
11.60	98647	98628	98609	98590	98572	98553	98534	98516	98497	98478
11.70	98460	98441	98423	98404	98385	98367	98348	98330	98311	98293
11.80	98275	98256	98238	98219	98201	98183	98164	98146	98128	98109
11.90	98091	98073	98054	98036	98018	98000	97982	97963	97945	97927
12.00	97909	97891	97873	97855	97837	97818	97800	97782	97764	97746
12.10	97728	97710	97692	97675	97657	97639	97621	97603	97585	97567
12.20	97549	97532	97514	97496	97478	97461	97443	97425	97407	97390
12.30	97372	97354	97337	97319	97301	97284	97266	97249	97231	97214
12.40	97196	97179	97161	97144	97126	97109	97091	97074	97056	97039
12.50	97022	97004	96987	96969	96952	96935	96917	96900	96883	96866
12.60	96848	96831	96814	96797	96780	96762	96745	96728	96711	96694
12.70	96677	96660	96643	96625	96608	96591	96574	96557	96540	96523
12.80	96506	96489	96473	96456	96439	96422	96405	96388	96371	96354
12.90	96338	96321	96304	96287	96270	96254	96237	96220	96203	96187
13.00	96170	96153	96137	96120	96103	96087	96070	96053	96037	96020
13.10	96004	95987	95971	95954	95938	95921	95905	95888	95872	95855
13.20	95839	95822	95806	95789	95773	95757	95740	95724	95708	95691
13.30	95675	95659	95642	95626	95610	95594	95577	95561	95545	95529
13.40	95513	95496	95480	95464	95448	95432	95416	95400	95384	95367
13.50	95351	95335	95319	95303	95287	95271	95255	95239	95223	95207
13.60	95191	95176	95160	95144	95128	95112	95096	95080	95064	95049
13.70	95033	95017	95001	94985	94970	94954	94938	94922	94907	94891
13.80	94875	94859	94844	94828	94812	94797	94781	94766	94750	94734
13.90	94719	94703	94688	94672	94657	94641	94625	94610	94594	94579
14.00	94564	94548	94533	94517	94502	94486	94471	94456	94440	94425
14.10	94409	94394	94379	94363	94348	94333	94317	94302	94287	94272
14.20	94256	94241	94226	94211	94196	94180	94165	94150	94135	94120
14.30	94105	94089	94074	94059	94044	94029	94014	93999	93984	93969
14.40	93954	93939	93924	93909	93894	93879	93864	93849	93834	93819
14.50	93804	93789	93774	93759	93744	93730	93715	93700	93685	93670
14.60	93655	93641	93626	93611	93596	93581	93567	93552	93537	93523
14.70	93508	93493	93478	93464	93449	93434	93420	93405	93390	93376
14.80	93361	93347	93332	93317	93303	93288	93274	93259	93245	93230
14.90	93216	93201	93187	93172	93158	93143	93129	93114	93100	93086
15.00	93071	93057	93042	93028	93014	92999	92985	92970	92956	92942
15.10	92928	92913	92899	92885	92871	92856	92842	92828	92813	92799
15.20	92785	92771	92757	92742	92728	92714	92700	92686	92672	92657
15.30	92643	92629	92615	92601	92587	92573	92559	92545	92531	92517
15.40	92503	92489	92475	92461	92447	92433	92419	92405	92391	92377
15.50	92363	92349	92335	92321	92307	92293	92279	92266	92252	92238
15.60	92224	92210	92196	92183	92169	92155	92141	92127	92114	92100
15.70	92086	92072	92059	92045	92031	92018	92004	91990	91976	91963
15.80	91949	91935	91922	91908	91895	91881	91867	91854	91840	91827
15.90	91813	91799	91786	91772	91759	91745	91732	91718	91705	91691
16.00	91678	91664	91651	91637	91624	91610	91597	91584	91570	91557
16.10	91543	91530	91517	91503	91490	91477	91463	91450	91437	91423
16.20	91410	91397	91383	91370	91357	91343	91330	91317	91304	91290
16.30	91277	91264	91251	91238	91224	91211	91198	91185	91172	91159
16.40	91145	91132	91119	91106	91093	91080	91067	91054	91041	91027
16.50	91014	91001	90988	90975	90962	90949	90936	90923	90910	90897
16.60	90884	90871	90858	90845	90832	90819	90806	90794	90781	90768
16.70	90755	90742	90729	90716	90703	90690	90678	90665	90652	90639
16.80	90626	90613	90601	90588	90575	90562	90549	90537	90524	90511
16.90	90498	90486	90473	90460	90447	90435	90422	90409	90397	90384
17.00	90371	90359	90346	90333	90321	90308	90295	90283	90270	90258
17.10	90245	90232	90220	90207	90195	90182	90170	90157	90145	90132
17.20	90120	90107	90095	90082	90070	90057	90045	90032	90020	90007
17.30	89985	89972	89960	89948	89935	89923	89910	89898	89886	89873
17.40	89871	89858	89846	89834	89821	89809	89797	89784	89772	89760
17.50	89747	89735	89723	89711	89698	89686	89674	89662	89649	89637
17.60	89625	89613	89600	89588	89576	89564	89552	89540	89527	89515
17.70	89503	89491	89479	89467	89455	89442	89430	89418	89406	89394
17.80	89382	89370	89358	89346	89334	89322	89310	89298	89286	89273
17.90	89261	89249	89237	89225	89213	89202	89190	89178	89166	89154
18.00	89142	89130	89118	89106	89094	89082	89070	89058	89046	89035
18.10	89023	89011	89000	88988	88975	88963	88952	88940	88928	88916
18.20	88904	88892	88881	88869	88857	88845	88834	88822	88810	88798
18.30	88787	88775	88763	88751	88740	88728	88716	88705	88693	88681
18.40	88669	88658	88646	88634	88623	88611	88600	88588	88576	88565
18.50	88553	88541	88530	88518	88507	88495	88484	88472	88460	88449
18.60	88437	88426	88414	88403	88391	88380	88368	88357	88345	88334
18.70	88322	88311	88299	88288	88276	88265	88253	88242	88230	88219
18.80	88208	88196	88185	88173	88162	88151	88139	88128	88116	88105
18.90	88094	88082	88071	88060	88048	88037	88026	88014	88003	87992
19.00	87981	87969	87958	87947	87935	87924	87913	87902	87890	87879
19.10	87868	87857	87845	87834	87823	87812	87801	87789	87778	87767
19.20	87756	87745	87733	87722	87711	87700	87689	87678	87667	87656
19.30	87644	87633	87622	87611	87600	87589	87578	87567	87556	87545
19.40	87534	87522	87511	87500	87489	87478	87467	87456	87445	87434
19.50	87423	87412	87401	87390	87379	87368	87357	87346	87335	87325
19.60	87314	87303	87292	87281	87270	87259	87248	87237	87226	87215
19.70	87204	87194	87183	87172	87161	87150	87139	87128	87118	87107
19.80	87096	87085	87074	87064	87053	87042	87031	87020	87010	86999
19.90	86988	86977	86966	86956	86945	86934	86923	86913	86902	86891



## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
20.0	86881	86774	86667	86562	86456	86352	86247	86144	86041	85938
21.0	85836	85734	85633	85532	85432	85332	85233	85135	85036	84938
22.0	84841	84744	84648	84552	84456	84361	84266	84172	84078	83985
23.0	83892	83799	83707	83615	83524	83433	83342	83252	83163	83073
24.0	82984	82896	82807	82719	82632	82545	82458	82372	82286	82200
25.0	82115	82030	81945	81861	81777	81693	81610	81527	81444	81362
26.0	81280	81198	81117	81036	80956	80875	80795	80715	80636	80557
27.0	80478	80399	80321	80243	80166	80088	80011	79935	79858	79782
28.0	79706	79630	79555	79480	79405	79330	79256	79182	79108	79035
29.0	78962	78889	78816	78744	78671	78600	78528	78456	78385	78314
30.0	78244	78173	78103	78033	77963	77894	77824	77755	77686	77618
31.0	77550	77481	77413	77346	77278	77211	77144	77077	77011	76944
32.0	76878	76812	76746	76681	76616	76551	76486	76421	76356	76292
33.0	76228	76164	76101	76037	75974	75911	75848	75785	75722	75660
34.0	75598	75536	75474	75413	75351	75290	75229	75168	75107	75047
35.0	74987	74927	74867	74807	74747	74688	74628	74569	74510	74452
36.0	74393	74335	74276	74218	74160	74103	74045	73988	73930	73873
37.0	73816	73759	73703	73646	73590	73534	73478	73422	73366	73311
38.0	73255	73200	73145	73090	73035	72980	72926	72871	72817	72763
39.0	72709	72655	72602	72548	72495	72441	72388	72335	72283	72230
40.0	72177	72125	72073	72020	71968	71917	71865	71813	71762	71710
41.0	71659	71608	71557	71506	71455	71405	71354	71304	71254	71204
42.0	71154	71104	71054	71004	70955	70905	70856	70807	70758	70709
43.0	70660	70612	70563	70515	70466	70418	70370	70322	70274	70226
44.0	70179	70131	70084	70037	69989	69942	69895	69848	69802	69755
45.0	69708	69662	69616	69569	69523	69477	69431	69385	69340	69294
46.0	69249	69203	69158	69113	69068	69023	68978	68933	68888	68844
47.0	68799	68755	68710	68666	68622	68578	68534	68490	68446	68403
48.0	68359	68316	68272	68229	68186	68143	68100	68057	68014	67971
49.0	67929	67886	67844	67801	67759	67717	67675	67633	67591	67549
50.0	67507	67465	67424	67382	67341	67299	67258	67217	67176	67135
51.0	67094	67053	67012	66972	66931	66891	66850	66810	66770	66729
52.0	66689	66649	66609	66569	66530	66490	66450	66411	66371	66332
53.0	66293	66253	66214	66175	66136	66097	66058	66019	65981	65942
54.0	65903	65865	65826	65788	65750	65712	65673	65635	65597	65559
55.0	65522	65484	65446	65408	65371	65333	65296	65258	65221	65184
56.0	65147	65110	65072	65035	64999	64962	64925	64888	64852	64815
57.0	64778	64742	64705	64669	64633	64597	64561	64524	64488	64452
58.0	64417	64381	64345	64309	64274	64238	64202	64167	64132	64096
59.0	64061	64026	63990	63955	63920	63885	63850	63815	63781	63746
60.0	63711	63677	63642	63607	63573	63539	63504	63470	63436	63401
61.0	63367	63333	63299	63265	63231	63197	63164	63130	63096	63063
62.0	63029	62995	62962	62929	62895	62862	62829	62795	62762	62729
63.0	62696	62663	62630	62597	62564	62532	62499	62466	62434	62401
64.0	62368	62336	62303	62271	62239	62206	62174	62142	62110	62078
65.0	62046	62014	61982	61950	61918	61886	61855	61823	61791	61760
66.0	61728	61697	61665	61634	61602	61571	61540	61509	61477	61446
67.0	61415	61384	61353	61322	61291	61261	61230	61199	61168	61138
68.0	61107	61076	61046	61015	60985	60955	60924	60894	60864	60833
69.0	60803	60773	60743	60713	60683	60653	60623	60593	60563	60533
70.0	60504	60474	60445	60415	60385	60356	60326	60297	60268	60238
71.0	60209	60180	60150	60121	60092	60063	60034	60005	59976	59947
72.0	59918	59889	59860	59831	59802	59773	59745	59717	59688	59659
73.0	59631	59602	59574	59546	59517	59489	59461	59432	59404	59376
74.0	59348	59320	59292	59264	59236	59208	59180	59152	59124	59096
75.0	59068	59041	59013	58985	58958	58930	58903	58875	58848	58820
76.0	58793	58766	58738	58711	58684	58656	58629	58602	58575	58548
77.0	58521	58494	58467	58440	58413	58386	58359	58333	58306	58279
78.0	58252	58226	58199	58173	58146	58120	58093	58067	58040	58014
79.0	57987	57961	57935	57909	57882	57856	57830	57804	57778	57752
80.0	57726	57700	57674	57648	57622	57596	57570	57544	57519	57493
81.0	57467	57442	57416	57390	57365	57339	57314	57288	57263	57237
82.0	57212	57187	57161	57136	57111	57085	57060	57035	57010	56985
83.0	56960	56935	56910	56885	56860	56835	56810	56785	56760	56735
84.0	56711	56686	56661	56636	56612	56587	56563	56538	56513	56489
85.0	56464	56440	56415	56391	56367	56342	56318	56294	56269	56245
86.0	56221	56197	56173	56149	56124	56100	56076	56052	56028	56004
87.0	55980	55957	55933	55909	55885	55861	55837	55814	55790	55766
88.0	55743	55719	55695	55672	55648	55625	55601	55578	55554	55531
89.0	55508	55484	55461	55438	55414	55391	55368	55345	55321	55298
90.0	55275	55252	55229	55206	55183	55160	55137	55114	55091	55068
91.0	55048	55025	55000	54977	54954	54931	54909	54886	54863	54840
92.0	54818	54795	54773	54750	54728	54705	54683	54660	54638	54615
93.0	54593	54571	54548	54526	54504	54481	54459	54437	54415	54393
94.0	54370	54348	54326	54304	54282	54260	54238	54216	54194	54172
95.0	54150	54128	54106	54085	54063	54041	54019	53997	53976	53954
96.0	53932	53911	53889	53867	53846	53824	53803	53781	53760	53738
97.0	53717	53695	53674	53653	53631	53610	53588	53567	53546	53525
98.0	53503	53482	53461	53440	53419	53397	53376	53355	53334	53313
99.0	53292	53271	53250	53229	53208	53187	53166	53146	53125	53104
100.0	53083	53062	53041	53021	53000	52979	52959	52938	52917	52897
101.0	52876	52855	52835	52814	52794	52773	52753	52732	52712	52691
102.0	52671	52651	52630	52610	52590	52569	52549	52529	52508	52488
103.0	52468	52448	52428	52408	52387	52367	52347	52327	52307	52287
104.0	52267	52247	52227	52207	52187	52167	52147	52127	52107	52087
105.0	52068	52048	52028	52009	51989	51969	51949	51930	51910	51890
106.0	51871	51851	51831	51812	51792	51773	51753	51734	51714	51695
107.0	51675	51656	51636	51617	51598	51578	51559	51540	51520	51501
108.0	51482	51463	51443	51424	51405	51386	51367	51347	51328	51309
109.0	51290	51271	51252	51233	51214	51195	51176	51157	51138	51119
110.0	51100	51081	51062	51043	51025	51006	50987	50968	50949	50930
111.0	50912	50893	50874	50856	50837	50818	50800	50781	50762	50744
112.0	50728	50707	50688	50669	50651	50632	50614	50596	50577	50559
113.0	50540	50522	50503	50485	50467	50448	50430	50412	50393	50375
114.0	50357	50339	50320	50302	50284	50266	50248	50230	50211	50193
115.0	50175	50157	50139	50121	50103	50085	50067	50049	50031	50013
116.0	49995	49977	49959	49941	49923	49906	49888	49870	49852	49834
117.0	49816	49799	49781	49763	49745	49728	49710	49692	49675	49657
118.0	49639	49622	49604	49587	49569	49551	49534	49516	49499	49481
119.0	49464	49446	49429	49411	49394	49377	49359	49342	49324	49307

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
120.0	49290	49272	49255	49238	49220	49203	49186	49169	49151	49134
121.0	49117	49100	49083	49065	49048	49031	49014	48997	48980	48963
122.0	48946	48929	48912	48895	48878	48861	48844	48827	48810	48793
123.0	48776	48759	48742	48725	48708	48692	48675	48658	48641	48624
124.0	48607	48591	48574	48557	48540	48524	48507	48490	48474	48457
125.0	48440	48424	48407	48390	48374	48357	48341	48324	48308	48291
126.0	48275	48258	48242	48225	48209	48192	48176	48159	48143	48126
127.0	48110	48094	48077	48061	48045	48028	48012	47996	47979	47963
128.0	47947	47931	47914	47898	47882	47866	47850	47833	47817	47801
129.0	47785	47769	47753	47737	47721	47705	47688	47672	47656	47640
130.0	47624	47608	47592	47576	47560	47544	47529	47513	47497	47481
131.0	47465	47449	47433	47417	47401	47386	47370	47354	47338	47322
132.0	47307	47291	47275	47259	47244	47228	47212	47197	47181	47165
133.0	47150	47134	47118	47103	47087	47072	47056	47040	47025	47009
134.0	46994	46978	46963	46947	46932	46916	46901	46885	46870	46855
135.0	46839	46824	46808	46793	46778	46762	46747	46732	46716	46701
136.0	46686	46670	46655	46640	46624	46609	46594	46579	46564	46548
137.0	46533	46518	46503	46488	46472	46457	46442	46427	46412	46397
138.0	46382	46367	46352	46337	46322	46307	46292	46277	46262	46247
139.0	46232	46217	46202	46187	46172	46157	46142	46127	46112	46097
140.0	46082	46068	46053	46038	46023	46008	45993	45979	45964	45949
141.0	45934	45920	45905	45890	45875	45861	45846	45831	45817	45802
142.0	45787	45773	45758	45743	45729	45714	45700	45685	45670	45656
143.0	45641	45627	45612	45598	45583	45569	45554	45540	45525	45511
144.0	45496	45482	45467	45453	45439	45424	45410	45395	45381	45367
145.0	45352	45338	45324	45309	45295	45281	45266	45252	45238	45224
146.0	45209	45195	45181	45167	45152	45138	45124	45110	45096	45081
147.0	45067	45053	45039	45025	45011	44997	44983	44968	44954	44940
148.0	44926	44912	44898	44884	44870	44856	44842	44828	44814	44800
149.0	44786	44772	44758	44744	44730	44716	44703	44689	44675	44661
150.0	44647	44633	44619	44605	44592	44578	44564	44550	44536	44523
151.0	44509	44495	44481	44467	44454	44440	44426	44413	44399	44385
152.0	44371	44358	44344	44330	44317	44303	44289	44276	44262	44249
153.0	44235	44221	44208	44194	44181	44167	44154	44140	44126	44113
154.0	44099	44086	44072	44059	44045	44032	44019	44005	43992	43978
155.0	43965	43951	43938	43925	43911	43898	43884	43871	43858	43844
156.0	43831	43818	43804	43791	43778	43764	43751	43738	43725	43711
157.0	43698	43685	43672	43658	43645	43632	43619	43605	43592	43579
158.0	43566	43553	43540	43526	43513	43500	43487	43474	43461	43448
159.0	43435	43422	43409	43395	43382	43369	43356	43343	43330	43317
160.0	43304	43291	43278	43265	43252	43239	43226	43213	43200	43188
161.0	43175	43162	43149	43136	43123	43110	43097	43084	43071	43059
162.0	43046	43033	43020	43007	42994	42982	42969	42956	42943	42930
163.0	42918	42905	42892	42879	42867	42854	42841	42829	42816	42803
164.0	42790	42778	42765	42752	42740	42727	42714	42702	42689	42677
165.0	42664	42651	42639	42626	42614	42601	42588	42576	42563	42551
166.0	42538	42526	42513	42501	42488	42476	42463	42451	42438	42426
167.0	42413	42401	42388	42376	42364	42351	42339	42326	42314	42301
168.0	42289	42277	42264	42252	42240	42227	42215	42203	42190	42178
169.0	42166	42153	42141	42129	42116	42104	42092	42080	42067	42055
170.0	42043	42031	42018	42006	41994	41982	41970	41957	41945	41933
171.0	41921	41909	41897	41884	41872	41860	41848	41836	41824	41812
172.0	41800	41787	41775	41763	41751	41739	41727	41715	41703	41691
173.0	41679	41667	41655	41643	41631	41619	41607	41595	41583	41571
174.0	41559	41547	41535	41523	41511	41499	41487	41475	41464	41452
175.0	41440	41428	41416	41404	41392	41380	41369	41357	41345	41333
176.0	41321	41309	41298	41286	41274	41262	41250	41239	41227	41215
177.0	41203	41192	41180	41168	41156	41145	41133	41121	41110	41098
178.0	41086	41074	41063	41051	41039	41028	41016	41004	40993	40981
179.0	40970	40958	40946	40935	40923	40912	40900	40888	40877	40865
180.0	40854	40842	40831	40819	40807	40796	40784	40773	40761	40750
181.0	40738	40727	40715	40704	40692	40681	40670	40658	40647	40635
182.0	40624	40612	40601	40589	40578	40567	40555	40544	40532	40521
183.0	40510	40498	40487	40476	40464	40453	40442	40430	40419	40408
184.0	40396	40385	40374	40362	40351	40340	40329	40317	40306	40295
185.0	40284	40272	40261	40250	40239	40227	40216	40205	40194	40183
186.0	40171	40160	40149	40138	40127	40116	40104	40093	40082	40071
187.0	40060	40049	40038	40027	40015	40004	39993	39982	39971	39960
188.0	39949	39938	39927	39916	39905	39894	39883	39872	39861	39850
189.0	39839	39828	39817	39806	39795	39784	39773	39762	39751	39740
190.0	39729	39718	39707	39696	39685	39674	39663	39652	39641	39630
191.0	39620	39609	39598	39587	39576	39565	39554	39543	39533	39522
192.0	39511	39500	39489	39478	39468	39457	39446	39435	39424	39414
193.0	39403	39392	39381	39370	39360	39349	39338	39327	39317	39306
194.0	39295	39285	39274	39263	39252	39242	39231	39220	39210	39199
195.0	39188	39178	39167	39156	39146	39135	39124	39114	39103	39092
196.0	39082	39071	39061	39050	39039	39029	39018	39008	38997	38987
197.0	38976	38965	38955	38944	38934	38923	38913	38902	38892	38881
198.0	38871	38860	38850	38839	38829	38818	38808	38797	38787	38776
199.0	38766	38755	38745	38734	38724	38714	38703	38693	38682	38672
200.0	38662	38651	38641	38630	38620	38610	38599	38589	38578	38568
201.0	38558	38547	38537	38527	38516	38506	38496	38485	38475	38465
202.0	38455	38444	38434	38424	38413	38403	38393	38383	38372	38362
203.0	38352	38342	38331	38321	38311	38301	38290	38280	38270	38260
204.0	38250	38239	38229	38219	38209	38199	38188	38178	38168	38158
205.0	38148	38138	38127	38117	38107	38097	38087	38077	38067	38057
206.0	38047	38036	38026	38016	38006	37996	37986	37976	37966	37956
207.0	37946	37936	37926	37916	37906	37896	37886	37876	37866	37856
208.0	37846	37836	37826	37816	37806	37796	37786	37776	37766	37756
209.0	37746	37736	37726	37716	37706	37696	37686	37676	37666	37656
210.0	37646	37637	37627	37617	37607	37597	37587	37577	37567	37557
211.0	37548	37538	37528	37518	37508	37498	37488	37479	37469	37459
212.0	37449	37439	37430	37420	37410	37400	37390	37381	37371	37361
213.0	37351	37342	37332	37322	37312	37303	37293	37283	37273	37264
214.0	37254	37244	37234	37225	37215	37205	37196	37186	37176	37167
215.0	37157	37147	37137	37128	37118	37109	37099	37089	37079	37070
216.0	37060	37051	37041	37031	37022	37012	37003	36993	36983	36974
217.0	36964	36954	36945	36935	36926	36916	36907	36897	36888	36878
218.0	36869	36859	36849	36840	36830	36821	36811	36802	36792	36783
219.0	36773	36764	36754	36745	36735	36726	36716	36707	36697	36688

GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
220.0	36679	36669	36660	36650	36641	36631	36622	36612	36603	36594
221.0	36584	36575	36565	36556	36547	36537	36528	36518	36509	36500
222.0	36490	36481	36472	36462	36453	36443	36434	36425	36415	36406
223.0	36397	36387	36378	36369	36359	36350	36341	36332	36322	36313
224.0	36304	36294	36285	36276	36267	36257	36248	36239	36229	36220
225.0	36211	36202	36192	36183	36174	36165	36156	36146	36137	36128
226.0	36119	36109	36100	36091	36082	36073	36064	36054	36045	36036
227.0	36027	36018	36008	35999	35990	35981	35972	35963	35954	35944
228.0	35935	35926	35917	35908	35899	35890	35881	35871	35862	35853
229.0	35844	35835	35826	35817	35808	35799	35789	35780	35771	35762
230.0	35753	35744	35735	35726	35717	35708	35699	35690	35681	35672
231.0	35663	35654	35645	35635	35626	35617	35608	35599	35590	35581
232.0	35572	35563	35554	35545	35536	35527	35518	35509	35500	35491
233.0	35482	35473	35464	35455	35446	35437	35428	35419	35410	35401
234.0	35393	35384	35375	35366	35357	35348	35339	35330	35321	35312
235.0	35303	35294	35286	35277	35268	35259	35250	35241	35232	35223
236.0	35214	35206	35197	35188	35179	35170	35161	35152	35143	35135
237.0	35126	35117	35108	35099	35090	35081	35073	35064	35055	35046
238.0	35037	35028	35020	35011	35002	34993	34984	34976	34967	34958
239.0	34949	34940	34932	34923	34914	34905	34896	34888	34879	34870
240.0	34861	34853	34844	34835	34826	34818	34809	34800	34791	34783
241.0	34774	34765	34756	34748	34739	34730	34721	34713	34704	34695
242.0	34687	34678	34669	34660	34652	34643	34634	34626	34617	34608
243.0	34600	34591	34582	34574	34565	34556	34548	34539	34530	34522
244.0	34513	34504	34496	34487	34478	34470	34461	34453	34444	34435
245.0	34427	34418	34409	34401	34392	34384	34375	34366	34358	34349
246.0	34341	34332	34323	34315	34306	34298	34289	34281	34272	34263
247.0	34255	34246	34238	34229	34221	34212	34203	34195	34186	34178
248.0	34169	34161	34152	34144	34135	34127	34118	34110	34101	34093
249.0	34084	34076	34067	34059	34050	34042	34033	34025	34016	34008
250.0	33999	33991	33982	33974	33965	33957	33948	33940	33931	33923
251.0	33914	33906	33898	33889	33881	33872	33864	33855	33847	33838
252.0	33830	33822	33813	33805	33796	33788	33780	33771	33763	33754
253.0	33746	33738	33729	33721	33712	33704	33696	33687	33679	33670
254.0	33662	33654	33645	33637	33629	33620	33612	33604	33595	33587
255.0	33578	33570	33562	33553	33545	33537	33528	33520	33512	33503
256.0	33495	33487	33478	33470	33462	33454	33445	33437	33429	33420
257.0	33412	33404	33395	33387	33379	33371	33362	33354	33346	33338
258.0	33329	33321	33313	33304	33296	33288	33280	33271	33263	33255
259.0	33247	33238	33230	33222	33214	33206	33197	33189	33181	33173
260.0	33164	33156	33148	33140	33132	33123	33115	33107	33099	33091
261.0	33082	33074	33066	33058	33050	33041	33033	33025	33017	33009
262.0	33001	32992	32984	32976	32968	32960	32952	32943	32935	32927
263.0	32919	32911	32903	32895	32887	32878	32870	32862	32854	32846
264.0	32838	32830	32822	32813	32805	32797	32789	32781	32773	32765
265.0	32757	32749	32741	32732	32724	32716	32708	32700	32692	32684
266.0	32676	32668	32660	32652	32644	32636	32628	32620	32612	32603
267.0	32595	32587	32579	32571	32563	32555	32547	32539	32531	32523
268.0	32515	32507	32499	32491	32483	32475	32467	32459	32451	32443
269.0	32435	32427	32419	32411	32403	32395	32387	32379	32371	32363
270.0	32355	32347	32339	32331	32323	32315	32308	32300	32292	32284
271.0	32276	32268	32260	32252	32244	32236	32228	32220	32212	32204
272.0	32196	32188	32181	32173	32165	32157	32149	32141	32133	32125
273.0	32117	32109	32101	32093	32086	32078	32070	32062	32054	32046
274.0	32038	32031	32023	32015	32007	32000	31991	31983	31975	31968
275.0	31960	31952	31944	31936	31928	31921	31913	31905	31897	31889
276.0	31881	31874	31866	31858	31850	31842	31834	31827	31819	31811
277.0	31803	31795	31788	31780	31772	31764	31756	31749	31741	31733
278.0	31725	31717	31710	31702	31694	31686	31679	31671	31663	31655
279.0	31648	31640	31632	31624	31617	31609	31601	31593	31586	31578
280.0	31570	31562	31555	31547	31539	31531	31524	31516	31508	31501
281.0	31493	31485	31477	31470	31462	31454	31447	31439	31431	31423
282.0	31416	31408	31400	31393	31385	31377	31370	31362	31354	31347
283.0	31339	31331	31324	31316	31308	31301	31293	31285	31278	31270
284.0	31262	31255	31247	31239	31232	31224	31216	31209	31201	31194
285.0	31186	31178	31171	31163	31155	31148	31140	31133	31125	31117
286.0	31110	31102	31095	31087	31079	31072	31064	31057	31049	31041
287.0	31034	31026	31019	31011	31004	30996	30988	30981	30973	30966
288.0	30958	30951	30943	30935	30928	30920	30913	30905	30898	30890
289.0	30883	30875	30867	30860	30852	30845	30837	30830	30822	30815
290.0	30807	30800	30792	30785	30777	30770	30762	30755	30747	30740
291.0	30732	30725	30717	30710	30702	30695	30687	30680	30672	30665
292.0	30657	30650	30642	30635	30627	30620	30612	30605	30597	30590
293.0	30583	30575	30568	30560	30553	30545	30538	30530	30523	30516
294.0	30508	30501	30493	30486	30478	30471	30463	30456	30449	30441
295.0	30434	30426	30419	30412	30404	30397	30389	30382	30375	30367
296.0	30360	30352	30345	30338	30330	30323	30315	30308	30301	30293
297.0	30286	30278	30271	30264	30256	30249	30242	30234	30227	30220
298.0	30212	30205	30197	30190	30183	30175	30168	30161	30153	30146
299.0	30139	30131	30124	30117	30109	30102	30095	30087	30080	30073
300.0	30065	30058	30051	30043	30036	30029	30022	30014	30007	30000
301.0	29992	29985	29978	29970	29963	29956	29949	29941	29934	29927
302.0	29919	29912	29905	29898	29890	29883	29876	29869	29861	29854
303.0	29847	29840	29832	29825	29818	29811	29803	29796	29789	29782
304.0	29774	29767	29760	29753	29745	29738	29731	29724	29716	29709
305.0	29702	29695	29688	29680	29673	29666	29659	29652	29644	29637
306.0	29630	29623	29616	29608	29601	29594	29587	29580	29572	29565
307.0	29558	29551	29544	29536	29529	29522	29515	29508	29501	29493
308.0	29486	29479	29472	29465	29458	29450	29443	29436	29429	29422
309.0	29415	29408	29400	29393	29386	29379	29372	29365	29358	29351
310.0	29343	29336	29329	29322	29315	29308	29301	29294	29286	29279
311.0	29272	29265	29258	29251	29243	29237	29230	29223	29215	29208
312.0	29201	29194	29187	29180	29173	29166	29159	29152	29145	29138
313.0	29130	29123	29116	29109	29102	29095	29088	29081	29074	29067
314.0	29060	29053	29046	29039	29032	29025	29018	29011	29003	28996
315.0	28989	28982	28975	28968	28961	28954	28947	28940	28933	28926
316.0	28919	28912	28905	28898	28891	28884	28877	28870	28863	28856
317.0	28849	28842	28835	28828	28821	28814	28807	28800	28793	28786
318.0	28779	28772	28765	28758	28751	28744	28737	28730	28723	28716
319.0	28709	28702	28696	28689	28682	28675	28668	28661	28654	28647

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
320.0	28640	28633	28626	28619	28612	28605	28598	28591	28584	28578
321.0	28571	28564	28557	28550	28543	28536	28529	28522	28515	28508
322.0	28501	28495	28488	28481	28474	28467	28460	28453	28446	28439
323.0	28432	28426	28419	28412	28405	28398	28391	28384	28377	28370
324.0	28364	28357	28350	28343	28336	28329	28322	28315	28309	28302
325.0	28295	28288	28281	28274	28267	28261	28254	28247	28240	28233
326.0	28226	28220	28213	28206	28199	28192	28185	28179	28172	28165
327.0	28158	28151	28144	28138	28131	28124	28117	28110	28104	28097
328.0	28090	28083	28076	28070	28063	28056	28049	28042	28036	28029
329.0	28022	28015	28008	28002	27995	27988	27981	27974	27968	27961
330.0	27954	27947	27941	27934	27927	27920	27914	27907	27900	27893
331.0	27886	27880	27873	27866	27859	27853	27846	27839	27832	27826
332.0	27819	27812	27805	27799	27792	27785	27779	27772	27765	27758
333.0	27752	27745	27738	27731	27725	27718	27711	27705	27698	27691
334.0	27684	27678	27671	27664	27658	27651	27644	27638	27631	27624
335.0	27617	27611	27604	27597	27591	27584	27577	27571	27564	27557
336.0	27551	27544	27537	27531	27524	27517	27511	27504	27497	27491
337.0	27484	27477	27471	27464	27457	27451	27444	27437	27431	27424
338.0	27417	27411	27404	27398	27391	27384	27378	27371	27364	27358
339.0	27351	27344	27338	27331	27325	27318	27311	27305	27298	27292
340.0	27285	27278	27272	27265	27258	27252	27245	27239	27232	27225
341.0	27219	27212	27206	27199	27192	27186	27179	27173	27166	27160
342.0	27153	27146	27140	27133	27127	27120	27114	27107	27100	27094
343.0	27087	27081	27074	27068	27061	27054	27048	27041	27035	27028
344.0	27022	27015	27009	27002	26995	26989	26982	26976	26969	26963
345.0	26956	26950	26943	26937	26930	26924	26917	26911	26904	26897
346.0	26891	26884	26878	26871	26865	26858	26852	26845	26839	26832
347.0	26826	26819	26813	26806	26800	26793	26787	26780	26774	26767
348.0	26761	26754	26748	26741	26735	26728	26722	26716	26709	26703
349.0	26696	26690	26683	26677	26670	26664	26657	26651	26644	26638
350.0	26631	26625	26619	26612	26606	26599	26593	26586	26580	26573
351.0	26567	26560	26554	26548	26541	26535	26528	26522	26515	26509
352.0	26503	26496	26490	26483	26477	26470	26464	26458	26451	26445
353.0	26438	26432	26426	26419	26413	26406	26400	26393	26387	26381
354.0	26374	26368	26361	26355	26349	26342	26336	26330	26323	26317
355.0	26310	26304	26298	26291	26285	26278	26272	26266	26259	26253
356.0	26247	26240	26234	26227	26221	26215	26208	26202	26196	26189
357.0	26183	26177	26170	26164	26158	26151	26145	26138	26132	26126
358.0	26119	26113	26107	26100	26094	26088	26081	26075	26069	26062
359.0	26056	26050	26043	26037	26031	26024	26018	26012	26006	25999
360.0	25993	25987	25980	25974	25968	25961	25955	25949	25942	25936
361.0	25930	25924	25917	25911	25905	25898	25892	25886	25880	25873
362.0	25867	25861	25854	25848	25842	25836	25829	25823	25817	25810
363.0	25804	25798	25792	25785	25779	25773	25767	25760	25754	25748
364.0	25742	25735	25729	25723	25716	25710	25704	25698	25692	25685
365.0	25679	25673	25667	25660	25654	25648	25642	25636	25629	25623
366.0	25617	25610	25604	25598	25592	25586	25579	25573	25567	25561
367.0	25554	25548	25542	25536	25530	25523	25517	25511	25505	25499
368.0	25492	25486	25480	25474	25468	25461	25455	25449	25443	25437
369.0	25430	25424	25418	25412	25406	25399	25393	25387	25381	25375
370.0	25369	25362	25356	25350	25344	25338	25332	25325	25319	25313
371.0	25307	25301	25295	25288	25282	25276	25270	25264	25258	25252
372.0	25245	25239	25233	25227	25221	25215	25209	25202	25196	25190
373.0	25184	25178	25172	25166	25160	25153	25147	25141	25135	25129
374.0	25123	25117	25110	25104	25098	25092	25086	25080	25074	25068
375.0	25062	25055	25049	25043	25037	25031	25025	25019	25013	25007
376.0	25001	24994	24988	24982	24976	24970	24964	24958	24952	24946
377.0	24940	24934	24927	24921	24915	24909	24903	24897	24891	24885
378.0	24879	24873	24867	24861	24855	24849	24843	24836	24830	24824
379.0	24818	24812	24806	24800	24794	24788	24782	24776	24770	24764
380.0	24758	24752	24746	24740	24734	24728	24722	24716	24709	24703
381.0	24697	24691	24685	24679	24673	24667	24661	24655	24649	24643
382.0	24637	24631	24625	24619	24613	24607	24601	24595	24589	24583
383.0	24577	24571	24565	24559	24553	24547	24541	24535	24529	24523
384.0	24517	24511	24505	24499	24493	24487	24481	24475	24469	24463
385.0	24457	24451	24445	24439	24433	24427	24421	24415	24409	24403
386.0	24398	24392	24386	24380	24374	24368	24362	24356	24350	24344
387.0	24338	24332	24326	24320	24314	24308	24302	24296	24290	24284
388.0	24278	24273	24267	24261	24255	24249	24243	24237	24231	24225
389.0	24219	24213	24207	24201	24195	24189	24184	24178	24172	24166
390.0	24160	24154	24148	24142	24136	24130	24124	24118	24113	24107
391.0	24101	24095	24089	24083	24077	24071	24065	24059	24054	24048
392.0	24042	24036	24030	24024	24018	24012	24006	24000	23994	23989
393.0	23983	23977	23971	23965	23959	23953	23948	23942	23936	23930
394.0	23924	23918	23912	23907	23901	23895	23889	23883	23877	23871
395.0	23865	23860	23854	23848	23842	23836	23830	23825	23819	23813
396.0	23807	23801	23795	23790	23784	23778	23772	23766	23760	23755
397.0	23749	23743	23737	23731	23725	23720	23714	23708	23702	23696
398.0	23690	23685	23679	23673	23667	23661	23655	23650	23644	23638
399.0	23632	23626	23621	23615	23609	23603	23597	23592	23586	23580
400.0	23574	23568	23563	23557	23551	23545	23539	23534	23528	23522
401.0	23516	23511	23505	23499	23493	23487	23482	23476	23470	23464
402.0	23459	23453	23447	23441	23435	23430	23424	23418	23412	23407
403.0	23401	23395	23389	23384	23378	23372	23366	23361	23355	23349
404.0	23343	23338	23332	23326	23320	23315	23309	23303	23297	23292
405.0	23286	23280	23274	23269	23263	23257	23251	23246	23240	23234
406.0	23229	23223	23217	23211	23206	23200	23194	23188	23183	23177
407.0	23171	23166	23160	23154	23148	23143	23137	23131	23126	23120
408.0	23114	23109	23103	23097	23091	23086	23080	23074	23069	23063
409.0	23057	23052	23046	23040	23034	23029	23023	23017	23012	23006
410.0	23000	22995	22989	22983	22978	22972	22966	22961	22955	22949
411.0	22944	22938	22932	22927	22921	22915	22910	22904	22898	22893
412.0	22887	22881	22876	22870	22864	22859	22853	22847	22842	22836
413.0	22830	22825	22819	22813	22808	22802	22797	22791	22785	22780
414.0	22774	22768	22763	22757	22751	22745	22740	22735	22729	22723
415.0	22718	22712	22706	22701	22695	22690	22684	22678	22673	22667
416.0	22661	22656	22650	22645	22639	22633	22628	22622	22617	22611
417.0	22605	22600	22594	22589	22583	22577	22572	22566	22561	22555
418.0	22549	22544	22538	22533	22527	22521	22516	22510	22505	22499
419.0	22493	22488	22482	22477	22471	22466	22460	22454	22449	22443

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
420.0	22438	22432	22427	22421	22415	22410	22404	22399	22393	22388
421.0	22382	22376	22371	22365	22360	22354	22349	22343	22338	22332
422.0	22326	22321	22315	22310	22304	22299	22293	22288	22282	22277
423.0	22271	22265	22260	22254	22249	22243	22238	22232	22227	22221
424.0	22216	22210	22205	22199	22194	22188	22182	22177	22171	22166
425.0	22160	22155	22149	22144	22138	22133	22127	22122	22116	22111
426.0	22105	22100	22094	22089	22083	22078	22072	22067	22061	22056
427.0	22050	22045	22039	22034	22028	22023	22017	22012	22006	22001
428.0	21995	21990	21984	21979	21973	21968	21962	21957	21951	21946
429.0	21940	21935	21930	21924	21919	21913	21908	21902	21897	21891
430.0	21886	21880	21875	21869	21864	21858	21853	21848	21842	21837
431.0	21831	21826	21820	21815	21809	21804	21798	21793	21788	21782
432.0	21777	21771	21766	21760	21755	21749	21744	21739	21733	21728
433.0	21722	21717	21711	21706	21700	21695	21690	21684	21679	21673
434.0	21668	21662	21657	21652	21646	21641	21635	21630	21625	21619
435.0	21614	21608	21603	21597	21592	21587	21581	21576	21570	21565
436.0	21560	21554	21549	21543	21538	21533	21527	21522	21516	21511
437.0	21506	21500	21495	21489	21484	21479	21473	21468	21462	21457
438.0	21452	21446	21441	21435	21430	21425	21419	21414	21409	21403
439.0	21398	21392	21387	21382	21376	21371	21366	21360	21355	21349
440.0	21344	21339	21333	21328	21323	21317	21312	21307	21301	21296
441.0	21291	21285	21280	21274	21269	21264	21258	21253	21248	21242
442.0	21237	21232	21226	21221	21216	21210	21205	21200	21194	21189
443.0	21184	21178	21173	21168	21162	21157	21152	21146	21141	21136
444.0	21130	21125	21120	21114	21109	21104	21098	21093	21088	21082
445.0	21077	21072	21066	21061	21055	21050	21045	21040	21035	21029
446.0	21024	21019	21013	21008	21003	20997	20992	20987	20981	20976
447.0	20971	20966	20960	20955	20950	20944	20939	20934	20929	20923
448.0	20918	20913	20907	20902	20897	20892	20886	20881	20876	20870
449.0	20865	20860	20855	20849	20844	20839	20833	20828	20823	20818
450.0	20812	20807	20802	20797	20791	20786	20781	20776	20770	20765
451.0	20760	20754	20749	20744	20739	20733	20728	20723	20718	20712
452.0	20707	20702	20697	20691	20686	20681	20676	20670	20665	20660
453.0	20655	20649	20644	20639	20634	20629	20623	20618	20613	20608
454.0	20602	20597	20592	20587	20581	20576	20571	20566	20561	20555
455.0	20550	20545	20540	20534	20529	20524	20519	20514	20508	20503
456.0	20498	20493	20487	20482	20477	20472	20467	20461	20456	20451
457.0	20446	20441	20435	20430	20425	20420	20415	20409	20404	20399
458.0	20394	20389	20383	20378	20373	20368	20363	20357	20352	20347
459.0	20342	20337	20332	20326	20321	20316	20311	20306	20300	20295
460.0	20290	20285	20280	20275	20269	20264	20259	20254	20249	20244
461.0	20238	20233	20228	20223	20218	20213	20207	20202	20197	20192
462.0	20187	20182	20176	20171	20166	20161	20156	20151	20146	20140
463.0	20135	20130	20125	20120	20115	20110	20104	20099	20094	20089
464.0	20084	20079	20073	20068	20063	20058	20053	20048	20043	20038
465.0	20032	20027	20022	20017	20012	20007	20002	19997	19991	19986
466.0	19981	19976	19971	19966	19961	19956	19950	19945	19940	19935
467.0	19930	19925	19920	19915	19910	19904	19899	19894	19889	19884
468.0	19879	19874	19869	19864	19858	19853	19848	19843	19838	19833
469.0	19828	19823	19818	19813	19807	19802	19797	19792	19787	19782
470.0	19777	19772	19767	19762	19757	19752	19746	19741	19736	19731
471.0	19726	19721	19716	19711	19706	19701	19696	19691	19686	19680
472.0	19675	19670	19665	19660	19655	19650	19645	19640	19635	19630
473.0	19625	19620	19615	19610	19605	19600	19595	19590	19585	19579
474.0	19574	19569	19564	19559	19554	19549	19544	19539	19534	19529
475.0	19524	19519	19514	19509	19504	19498	19493	19488	19483	19478
476.0	19473	19468	19463	19458	19453	19448	19443	19438	19433	19428
477.0	19423	19418	19413	19408	19403	19398	19393	19388	19383	19378
478.0	19373	19368	19363	19358	19353	19348	19343	19338	19333	19328
479.0	19323	19318	19313	19308	19303	19298	19293	19288	19283	19278
480.0	19273	19268	19263	19258	19253	19248	19243	19238	19233	19228
481.0	19223	19218	19213	19208	19203	19198	19193	19188	19183	19178
482.0	19173	19168	19163	19158	19153	19148	19143	19138	19133	19128
483.0	19123	19118	19113	19108	19103	19098	19093	19088	19083	19078
484.0	19073	19068	19063	19058	19053	19048	19043	19038	19033	19028
485.0	19024	19019	19014	19009	19004	18999	18994	18989	18984	18979
486.0	18974	18969	18964	18959	18954	18949	18944	18939	18934	18929
487.0	18925	18920	18915	18910	18905	18900	18895	18890	18885	18880
488.0	18875	18870	18865	18860	18855	18850	18845	18840	18835	18830
489.0	18826	18821	18816	18811	18806	18801	18796	18791	18786	18782
490.0	18777	18772	18767	18762	18757	18752	18747	18742	18737	18732
491.0	18727	18723	18718	18713	18708	18703	18698	18693	18688	18683
492.0	18678	18674	18669	18664	18659	18654	18649	18644	18639	18634
493.0	18629	18625	18620	18615	18610	18605	18600	18595	18590	18585
494.0	18581	18576	18571	18566	18561	18556	18551	18546	18541	18537
495.0	18532	18527	18522	18517	18512	18507	18502	18498	18493	18488
496.0	18483	18478	18473	18468	18464	18459	18454	18449	18444	18439
497.0	18434	18429	18425	18420	18415	18410	18405	18400	18395	18391
498.0	18386	18381	18376	18371	18366	18361	18357	18352	18347	18342
499.0	18337	18332	18328	18323	18318	18313	18308	18303	18298	18294
500.0	18289	18284	18279	18274	18269	18265	18260	18255	18250	18245
501.0	18240	18236	18231	18226	18221	18216	18211	18207	18202	18197
502.0	18192	18187	18183	18178	18173	18168	18163	18158	18154	18149
503.0	18144	18139	18134	18130	18125	18120	18115	18110	18106	18101
504.0	18096	18091	18086	18081	18077	18072	18067	18062	18057	18053
505.0	18048	18043	18038	18033	18029	18024	18019	18014	18009	18005
506.0	18000	17995	17990	17986	17981	17976	17971	17966	17962	17957
507.0	17952	17947	17942	17938	17933	17928	17923	17919	17914	17909
508.0	17904	17899	17895	17890	17885	17880	17876	17871	17866	17861
509.0	17856	17852	17847	17842	17837	17833	17828	17823	17818	17814
510.0	17809	17804	17799	17795	17790	17785	17780	17776	17771	17766
511.0	17761	17756	17752	17747	17742	17737	17733	17728	17723	17718
512.0	17713	17709	17704	17700	17695	17690	17685	17681	17676	17671
513.0	17666	17662	17657	17652	17647	17643	17638	17633	17628	17624
514.0	17619	17614	17610	17605	17600	17595	17591	17586	17581	17576
515.0	17572	17567	17562	17558	17553	17548	17543	17539	17534	17529
516.0	17524	17520	17515	17510	17506	17501	17496	17491	17487	17482
517.0	17477	17473	17468	17463	17459	17454	17449	17444	17440	17435
518.0	17430	17426	17421	17416	17412	17407	17402	17397	17393	17388
519.0	17383	17379	17374	17369	17365	17360	17355	17350	17346	17341

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
520.0	17336	17332	17327	17322	17318	17313	17308	17304	17299	17294
521.0	17290	17285	17280	17276	17271	17266	17262	17257	17252	17247
522.0	17243	17238	17233	17229	17224	17219	17215	17210	17205	17201
523.0	17196	17191	17187	17182	17177	17173	17168	17163	17159	17154
524.0	17150	17145	17140	17136	17131	17126	17122	17117	17112	17108
525.0	17103	17098	17094	17089	17084	17080	17075	17070	17066	17061
526.0	17056	17052	17047	17043	17038	17033	17029	17024	17019	17015
527.0	17010	17005	17001	16996	16992	16987	16982	16978	16973	16968
528.0	16964	16959	16954	16950	16945	16941	16936	16931	16927	16922
529.0	16917	16913	16908	16904	16899	16894	16890	16885	16881	16876
530.0	16871	16867	16862	16857	16853	16848	16844	16839	16834	16830
531.0	16825	16821	16816	16811	16807	16802	16798	16793	16788	16784
532.0	16779	16775	16770	16765	16761	16756	16752	16747	16742	16738
533.0	16733	16729	16724	16719	16715	16710	16706	16701	16696	16692
534.0	16687	16683	16678	16673	16669	16664	16660	16655	16651	16646
535.0	16641	16637	16632	16628	16623	16618	16614	16609	16605	16600
536.0	16596	16591	16586	16582	16577	16573	16568	16564	16559	16554
537.0	16550	16545	16541	16536	16532	16527	16523	16518	16513	16509
538.0	16504	16500	16495	16491	16486	16481	16477	16472	16468	16463
539.0	16459	16454	16450	16445	16441	16436	16431	16427	16422	16418
540.0	16413	16409	16404	16400	16395	16391	16386	16381	16377	16372
541.0	16368	16363	16359	16354	16350	16345	16341	16336	16332	16327
542.0	16322	16318	16313	16309	16304	16300	16295	16291	16286	16282
543.0	16277	16273	16268	16264	16259	16255	16250	16245	16241	16236
544.0	16232	16227	16223	16218	16214	16209	16205	16200	16196	16191
545.0	16187	16182	16178	16173	16169	16164	16160	16155	16151	16146
546.0	16142	16137	16133	16128	16124	16119	16115	16110	16106	16101
547.0	16097	16092	16088	16083	16079	16074	16070	16065	16061	16056
548.0	16052	16047	16043	16038	16034	16029	16025	16020	16016	16011
549.0	16007	16002	15998	15993	15989	15984	15980	15975	15971	15966
550.0	15962	15957	15953	15949	15944	15940	15935	15931	15926	15922
551.0	15917	15913	15908	15904	15899	15895	15890	15886	15881	15877
552.0	15873	15868	15864	15859	15855	15850	15846	15841	15837	15832
553.0	15828	15823	15819	15815	15810	15806	15801	15797	15792	15788
554.0	15783	15779	15774	15770	15766	15761	15757	15752	15748	15743
555.0	15739	15734	15730	15726	15721	15717	15712	15708	15703	15699
556.0	15694	15690	15686	15681	15677	15672	15668	15663	15659	15654
557.0	15650	15646	15641	15637	15632	15628	15623	15619	15615	15610
558.0	15606	15601	15597	15592	15588	15584	15579	15575	15570	15566
559.0	15562	15557	15553	15548	15544	15539	15535	15531	15526	15522
560.0	15517	15513	15508	15504	15500	15495	15491	15486	15482	15478
561.0	15473	15469	15464	15460	15456	15451	15447	15442	15438	15434
562.0	15429	15425	15420	15416	15412	15407	15403	15398	15394	15390
563.0	15385	15381	15376	15372	15368	15363	15359	15354	15350	15346
564.0	15341	15337	15332	15328	15324	15319	15315	15311	15306	15302
565.0	15297	15293	15289	15284	15280	15275	15271	15267	15262	15258
566.0	15254	15249	15245	15240	15236	15232	15227	15223	15219	15214
567.0	15210	15206	15201	15197	15192	15188	15184	15179	15175	15171
568.0	15166	15162	15157	15153	15149	15144	15140	15136	15131	15127
569.0	15123	15118	15114	15110	15105	15101	15096	15092	15088	15083
570.0	15079	15075	15070	15066	15062	15057	15053	15049	15044	15040
571.0	15036	15031	15027	15023	15018	15014	15010	15005	15001	14996
572.0	14992	14988	14983	14979	14975	14970	14966	14962	14957	14953
573.0	14949	14944	14940	14936	14931	14927	14923	14918	14914	14910
574.0	14905	14901	14897	14893	14888	14884	14880	14875	14871	14867
575.0	14862	14858	14854	14849	14845	14841	14836	14832	14828	14823
576.0	14819	14815	14810	14806	14802	14798	14793	14789	14785	14780
577.0	14776	14772	14767	14763	14759	14754	14750	14746	14742	14737
578.0	14733	14729	14724	14720	14716	14711	14707	14703	14698	14694
579.0	14690	14686	14681	14677	14673	14668	14664	14660	14656	14651
580.0	14647	14643	14638	14634	14630	14626	14621	14617	14613	14608
581.0	14604	14600	14596	14591	14587	14583	14578	14574	14570	14566
582.0	14561	14557	14553	14548	14544	14540	14536	14531	14527	14523
583.0	14519	14514	14510	14506	14501	14497	14493	14489	14484	14480
584.0	14476	14472	14467	14463	14459	14454	14450	14446	14442	14437
585.0	14433	14429	14425	14420	14416	14412	14408	14403	14399	14395
586.0	14391	14386	14382	14378	14373	14369	14365	14361	14357	14352
587.0	14348	14344	14340	14335	14331	14327	14323	14318	14314	14310
588.0	14306	14301	14297	14293	14289	14284	14280	14276	14272	14267
589.0	14263	14259	14255	14251	14246	14242	14238	14234	14229	14225
590.0	14221	14217	14212	14208	14204	14200	14195	14191	14187	14183
591.0	14179	14174	14170	14166	14162	14157	14153	14149	14145	14141
592.0	14136	14132	14128	14124	14119	14115	14111	14107	14103	14098
593.0	14094	14090	14086	14082	14077	14073	14069	14065	14060	14056
594.0	14052	14048	14044	14039	14035	14031	14027	14023	14018	14014
595.0	14010	14006	14002	13997	13993	13989	13985	13981	13976	13972
596.0	13968	13964	13960	13955	13951	13947	13943	13939	13934	13930
597.0	13926	13922	13918	13914	13909	13905	13901	13897	13893	13888
598.0	13884	13880	13876	13872	13867	13863	13859	13855	13851	13847
599.0	13842	13838	13834	13830	13826	13821	13817	13813	13809	13805
600.0	13801	13796	13792	13788	13784	13780	13776	13771	13767	13763
601.0	13759	13755	13751	13746	13742	13738	13734	13730	13726	13721
602.0	13717	13713	13709	13705	13701	13696	13692	13688	13684	13680
603.0	13676	13671	13667	13663	13659	13655	13651	13647	13642	13638
604.0	13634	13630	13626	13622	13617	13613	13609	13605	13601	13597
605.0	13593	13588	13584	13580	13576	13572	13568	13564	13559	13555
606.0	13551	13547	13543	13539	13535	13530	13526	13522	13518	13514
607.0	13510	13506	13501	13497	13493	13489	13485	13481	13477	13473
608.0	13468	13464	13460	13456	13452	13448	13444	13440	13435	13431
609.0	13427	13423	13419	13415	13411	13407	13402	13398	13394	13390
610.0	13386	13382	13378	13374	13369	13365	13361	13357	13353	13349
611.0	13345	13341	13337	13332	13328	13324	13320	13316	13312	13308
612.0	13304	13300	13295	13291	13287	13283	13279	13275	13271	13267
613.0	13263	13259	13254	13250	13246	13242	13238	13234	13230	13226
614.0	13222	13218	13213	13209	13205	13201	13197	13193	13189	13185
615.0	13181	13177	13172	13168	13164	13160	13156	13152	13148	13144
616.0	13140	13136	13132	13128	13123	13119	13115	13111	13107	13103
617.0	13099	13095	13091	13087	13083	13079	13074	13070	13066	13062
618.0	13058	13054	13050	13046	13042	13038	13034	13030	13026	13021
619.0	13017	13013	13009	13005	13001	12997	12993	12989	12985	12981



## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
620.0	12977	12973	12969	12965	12960	12956	12952	12948	12944	12940
621.0	12936	12932	12928	12924	12920	12916	12912	12908	12904	12900
622.0	12896	12891	12887	12883	12879	12875	12871	12867	12863	12859
623.0	12855	12851	12847	12843	12839	12835	12831	12827	12823	12819
624.0	12815	12811	12806	12802	12798	12794	12790	12786	12782	12778
625.0	12774	12770	12766	12762	12758	12754	12750	12746	12742	12738
626.0	12734	12730	12726	12722	12718	12714	12710	12706	12702	12698
627.0	12693	12689	12685	12681	12677	12673	12669	12665	12661	12657
628.0	12653	12649	12645	12641	12637	12633	12629	12625	12621	12617
629.0	12613	12609	12605	12601	12597	12593	12589	12585	12581	12577
630.0	12573	12569	12565	12561	12557	12553	12549	12545	12541	12537
631.0	12533	12529	12525	12521	12517	12513	12509	12505	12501	12497
632.0	12493	12489	12485	12481	12477	12473	12469	12465	12461	12457
633.0	12453	12449	12445	12441	12437	12433	12429	12425	12421	12417
634.0	12413	12409	12405	12401	12397	12393	12389	12385	12381	12377
635.0	12373	12369	12365	12361	12357	12353	12349	12345	12341	12337
636.0	12333	12329	12325	12321	12317	12313	12309	12305	12301	12297
637.0	12293	12289	12285	12281	12277	12273	12269	12265	12261	12257
638.0	12253	12250	12246	12242	12238	12234	12230	12226	12222	12218
639.0	12214	12210	12206	12202	12198	12194	12190	12186	12182	12178
640.0	12174	12170	12166	12162	12158	12154	12150	12146	12142	12139
641.0	12135	12131	12127	12123	12119	12115	12111	12107	12103	12099
642.0	12095	12091	12087	12083	12079	12075	12071	12067	12063	12059
643.0	12055	12052	12048	12044	12040	12036	12032	12028	12024	12020
644.0	12016	12012	12008	12004	12000	11996	11992	11988	11985	11981
645.0	11977	11973	11969	11965	11961	11957	11953	11949	11945	11941
646.0	11937	11933	11929	11925	11922	11918	11914	11910	11906	11902
647.0	11898	11894	11890	11886	11882	11878	11874	11871	11867	11863
648.0	11859	11855	11851	11847	11843	11839	11835	11831	11827	11824
649.0	11820	11816	11812	11808	11804	11800	11796	11792	11788	11784
650.0	11780	11777	11773	11769	11765	11761	11757	11753	11749	11745
651.0	11741	11737	11734	11730	11726	11722	11718	11714	11710	11706
652.0	11702	11698	11694	11691	11687	11683	11679	11675	11671	11667
653.0	11663	11659	11655	11652	11648	11644	11640	11636	11632	11628
654.0	11624	11620	11617	11613	11609	11605	11601	11597	11593	11589
655.0	11585	11582	11578	11574	11570	11566	11562	11558	11554	11550
656.0	11547	11543	11539	11535	11531	11527	11523	11519	11516	11512
657.0	11508	11504	11500	11496	11492	11488	11485	11481	11477	11473
658.0	11469	11465	11461	11457	11454	11450	11446	11442	11438	11434
659.0	11430	11426	11423	11419	11415	11411	11407	11403	11399	11395
660.0	11392	11388	11384	11380	11376	11372	11368	11365	11361	11357
661.0	11353	11349	11345	11341	11338	11334	11330	11326	11322	11318
662.0	11314	11311	11307	11303	11299	11295	11291	11287	11284	11280
663.0	11276	11272	11268	11264	11261	11257	11253	11249	11245	11241
664.0	11237	11234	11230	11226	11222	11218	11214	11211	11207	11203
665.0	11199	11195	11191	11187	11184	11180	11176	11172	11168	11164
666.0	11161	11157	11153	11149	11145	11141	11138	11134	11130	11126
667.0	11122	11118	11115	11111	11107	11103	11099	11095	11092	11088
668.0	11084	11080	11076	11072	11069	11065	11061	11057	11053	11050
669.0	11046	11042	11038	11034	11030	11027	11023	11019	11015	11011
670.0	11008	11004	11000	10996	10992	10988	10985	10981	10977	10973
671.0	10969	10966	10962	10958	10954	10950	10947	10943	10939	10935
672.0	10931	10927	10924	10920	10916	10912	10908	10905	10901	10897
673.0	10893	10889	10886	10882	10878	10874	10870	10867	10863	10859
674.0	10855	10851	10848	10844	10840	10836	10832	10829	10825	10821
675.0	10817	10813	10810	10806	10802	10798	10794	10791	10787	10783
676.0	10779	10776	10772	10768	10764	10760	10757	10753	10749	10745
677.0	10741	10738	10734	10730	10726	10722	10719	10715	10711	10707
678.0	10704	10700	10696	10692	10688	10685	10681	10677	10673	10670
679.0	10666	10662	10658	10654	10651	10647	10643	10639	10636	10632
680.0	10628	10624	10621	10617	10613	10609	10605	10602	10598	10594
681.0	10590	10587	10583	10579	10575	10572	10568	10564	10560	10556
682.0	10553	10549	10545	10541	10538	10534	10530	10526	10523	10519
683.0	10515	10511	10508	10504	10500	10496	10493	10489	10485	10481
684.0	10478	10474	10470	10466	10463	10459	10455	10451	10448	10444
685.0	10440	10436	10433	10429	10425	10421	10418	10414	10410	10406
686.0	10403	10399	10395	10391	10388	10384	10380	10376	10373	10369
687.0	10365	10361	10358	10354	10350	10346	10343	10339	10335	10331
688.0	10328	10324	10321	10317	10313	10309	10305	10302	10298	10294
689.0	10290	10287	10283	10279	10275	10272	10268	10264	10261	10257
690.0	10253	10249	10246	10242	10238	10234	10231	10227	10223	10220
691.0	10216	10212	10208	10205	10201	10197	10193	10190	10186	10182
692.0	10179	10175	10171	10167	10164	10160	10156	10153	10149	10145
693.0	10141	10138	10134	10130	10127	10123	10119	10115	10112	10108
694.0	10104	10101	10097	10093	10089	10086	10082	10078	10075	10071
695.0	10067	10064	10060	10056	10052	10049	10045	10041	10038	10034
696.0	10030	10026	10023	10019	10015	10012	10008	10004	10001	9997
697.0	9993	9990	9986	9982	9978	9975	9971	9967	9964	9960
698.0	9956	9953	9949	9945	9941	9938	9934	9930	9927	9923
699.0	9919	9916	9912	9908	9905	9901	9897	9894	9890	9886
700.0	9882	9879	9875	9871	9868	9864	9860	9857	9853	9849
701.0	9846	9842	9838	9835	9831	9827	9824	9820	9816	9813
702.0	9809	9805	9802	9798	9794	9790	9787	9783	9779	9776
703.0	9772	9768	9765	9761	9757	9754	9750	9746	9743	9739
704.0	9735	9732	9728	9724	9721	9717	9713	9710	9706	9702
705.0	9699	9695	9691	9688	9684	9680	9677	9673	9669	9666
706.0	9662	9659	9655	9651	9648	9644	9640	9637	9633	9629
707.0	9626	9622	9618	9615	9611	9607	9604	9600	9596	9593
708.0	9589	9585	9582	9578	9574	9571	9567	9564	9560	9556
709.0	9553	9549	9545	9542	9538	9534	9531	9527	9523	9520
710.0	9516	9512	9509	9505	9502	9498	9494	9491	9487	9483
711.0	9480	9476	9472	9469	9465	9462	9458	9454	9451	9447
712.0	9443	9440	9436	9432	9429	9425	9422	9418	9414	9411
713.0	9407	9403	9400	9396	9393	9389	9385	9382	9378	9374
714.0	9371	9367	9364	9360	9356	9353	9349	9345	9342	9338
715.0	9335	9331	9327	9324	9320	9316	9313	9309	9306	9302
716.0	9298	9295	9291	9287	9284	9280	9277	9273	9269	9266
717.0	9262	9259	9255	9251	9248	9244	9240	9237	9233	9230
718.0	9226	9222	9219	9215	9212	9208	9204	9201	9197	9194
719.0	9190	9186	9183	9179	9176	9172	9168	9165	9161	9158

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
720.0	9154	9150	9147	9143	9140	9136	9132	9129	9125	9122
721.0	9118	9114	9111	9107	9104	9100	9096	9093	9089	9086
722.0	9082	9078	9075	9071	9068	9064	9060	9057	9053	9050
723.0	9046	9042	9039	9035	9032	9028	9025	9021	9017	9014
724.0	9010	9007	9003	8999	8996	8992	8989	8985	8982	8978
725.0	8974	8971	8967	8964	8960	8956	8953	8949	8946	8942
726.0	8939	8935	8931	8928	8924	8921	8917	8914	8910	8906
727.0	8903	8899	8896	8892	8889	8885	8881	8878	8874	8871
728.0	8867	8864	8860	8856	8853	8849	8846	8842	8839	8835
729.0	8831	8828	8824	8821	8817	8814	8810	8806	8803	8799
730.0	8796	8792	8789	8785	8782	8778	8774	8771	8767	8764
731.0	8760	8757	8753	8750	8746	8742	8739	8735	8732	8728
732.0	8725	8721	8718	8714	8710	8707	8703	8700	8696	8693
733.0	8689	8686	8682	8678	8675	8671	8668	8664	8661	8657
734.0	8654	8650	8647	8643	8639	8636	8632	8629	8625	8622
735.0	8618	8615	8611	8608	8604	8601	8597	8593	8590	8586
736.0	8583	8579	8576	8572	8569	8565	8562	8558	8555	8551
737.0	8547	8544	8540	8537	8533	8530	8526	8523	8519	8516
738.0	8512	8509	8505	8502	8498	8494	8491	8487	8484	8480
739.0	8477	8473	8470	8466	8463	8459	8456	8452	8449	8445
740.0	8442	8438	8435	8431	8428	8424	8420	8417	8413	8410
741.0	8406	8403	8399	8396	8392	8389	8385	8382	8378	8375
742.0	8371	8368	8364	8361	8357	8354	8350	8347	8343	8340
743.0	8336	8333	8329	8326	8322	8319	8315	8312	8308	8305
744.0	8301	8298	8294	8290	8287	8283	8280	8276	8273	8269
745.0	8266	8262	8259	8255	8252	8248	8245	8241	8238	8234
746.0	8231	8227	8224	8220	8217	8213	8210	8206	8203	8199
747.0	8196	8192	8189	8185	8182	8178	8175	8172	8168	8165
748.0	8161	8158	8154	8151	8147	8144	8140	8137	8133	8130
749.0	8126	8123	8119	8116	8112	8109	8105	8102	8098	8095
750.0	8091	8088	8084	8081	8077	8074	8070	8067	8063	8060
751.0	8056	8053	8049	8046	8043	8039	8036	8032	8029	8025
752.0	8022	8018	8015	8011	8008	8004	8001	7997	7994	7990
753.0	7987	7983	7980	7976	7973	7969	7966	7963	7959	7956
754.0	7952	7949	7945	7942	7938	7935	7931	7928	7924	7921
755.0	7916	7914	7911	7907	7904	7900	7897	7893	7890	7886
756.0	7883	7879	7876	7873	7869	7866	7862	7859	7855	7852
757.0	7848	7845	7841	7838	7834	7831	7828	7824	7821	7817
758.0	7814	7810	7807	7803	7800	7796	7793	7790	7786	7783
759.0	7779	7776	7772	7769	7765	7762	7758	7755	7752	7748
760.0	7745	7741	7738	7734	7731	7727	7724	7721	7717	7714
761.0	7710	7707	7703	7700	7696	7693	7690	7686	7683	7679
762.0	7676	7672	7669	7666	7662	7659	7655	7652	7648	7645
763.0	7641	7638	7635	7631	7628	7624	7621	7617	7614	7611
764.0	7607	7604	7600	7597	7593	7590	7587	7583	7580	7576
765.0	7573	7569	7566	7563	7559	7556	7552	7549	7545	7542
766.0	7539	7535	7532	7528	7525	7521	7518	7515	7511	7508
767.0	7504	7501	7497	7494	7491	7487	7484	7480	7477	7474
768.0	7470	7467	7463	7460	7456	7453	7450	7446	7443	7439
769.0	7436	7433	7429	7426	7422	7419	7415	7412	7409	7405
770.0	7402	7398	7395	7392	7388	7385	7381	7378	7375	7371
771.0	7368	7364	7361	7357	7354	7351	7347	7344	7340	7337
772.0	7334	7330	7327	7323	7320	7317	7313	7310	7306	7303
773.0	7300	7296	7293	7289	7286	7283	7279	7276	7272	7269
774.0	7266	7262	7259	7255	7252	7249	7245	7242	7238	7235
775.0	7232	7228	7225	7222	7218	7215	7211	7208	7205	7201
776.0	7198	7194	7191	7188	7184	7181	7177	7174	7171	7167
777.0	7164	7161	7157	7154	7150	7147	7144	7140	7137	7133
778.0	7130	7127	7123	7120	7117	7113	7110	7106	7103	7100
779.0	7096	7093	7090	7086	7083	7079	7076	7073	7069	7066
780.0	7062	7059	7056	7052	7049	7046	7042	7039	7035	7032
781.0	7029	7025	7022	7019	7015	7012	7009	7005	7002	6998
782.0	6995	6992	6988	6985	6982	6978	6975	6971	6968	6965
783.0	6961	6958	6955	6951	6948	6945	6941	6938	6934	6931
784.0	6928	6924	6921	6918	6914	6911	6908	6904	6901	6898
785.0	6894	6891	6887	6884	6881	6877	6874	6871	6867	6864
786.0	6861	6857	6854	6851	6847	6844	6840	6837	6834	6830
787.0	6827	6824	6820	6817	6814	6810	6807	6804	6800	6797
788.0	6794	6790	6787	6784	6780	6777	6773	6770	6767	6763
789.0	6760	6757	6753	6750	6747	6743	6740	6737	6733	6730
790.0	6727	6723	6720	6717	6713	6710	6707	6703	6700	6697
791.0	6693	6690	6687	6683	6680	6677	6673	6670	6667	6663
792.0	6660	6657	6653	6650	6647	6643	6640	6637	6633	6630
793.0	6627	6623	6620	6617	6613	6610	6607	6603	6600	6597
794.0	6593	6590	6587	6583	6580	6577	6573	6570	6567	6563
795.0	6560	6557	6553	6550	6547	6543	6540	6537	6533	6530
796.0	6527	6524	6520	6517	6514	6510	6507	6504	6500	6497
797.0	6494	6490	6487	6484	6480	6477	6474	6470	6467	6464
798.0	6461	6457	6454	6451	6447	6444	6441	6437	6434	6431
799.0	6427	6424	6421	6417	6414	6411	6408	6404	6401	6398
800.0	6394	6391	6388	6384	6381	6378	6374	6371	6368	6365
801.0	6361	6358	6355	6351	6348	6345	6341	6338	6335	6332
802.0	6328	6325	6322	6318	6315	6312	6308	6305	6302	6299
803.0	6295	6292	6289	6285	6282	6279	6275	6272	6269	6266
804.0	6262	6259	6256	6252	6249	6246	6243	6239	6236	6233
805.0	6229	6226	6223	6220	6216	6213	6210	6206	6203	6200
806.0	6196	6193	6190	6187	6183	6180	6177	6173	6170	6167
807.0	6164	6160	6157	6154	6151	6147	6144	6141	6137	6134
808.0	6131	6128	6124	6121	6118	6114	6111	6108	6105	6101
809.0	6098	6095	6091	6088	6085	6082	6078	6075	6072	6069
810.0	6065	6062	6059	6055	6052	6049	6046	6042	6039	6036
811.0	6033	6030	6026	6023	6019	6016	6013	6010	6006	6003
812.0	6000	5997	5993	5990	5987	5984	5980	5977	5974	5970
813.0	5967	5964	5961	5957	5954	5951	5948	5944	5941	5938
814.0	5935	5931	5928	5925	5922	5918	5915	5912	5908	5905
815.0	5902	5899	5895	5892	5889	5886	5882	5879	5876	5873
816.0	5869	5866	5863	5860	5856	5853	5850	5847	5843	5840
817.0	5837	5834	5830	5827	5824	5821	5817	5814	5811	5808
818.0	5804	5801	5798	5795	5791	5788	5785	5782	5778	5775
819.0	5772	5769	5765	5762	5759	5756	5752	5749	5746	5743

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
820.0	5740	5736	5733	5730	5727	5723	5720	5717	5714	5710
821.0	5707	5704	5701	5697	5694	5691	5688	5684	5681	5678
822.0	5675	5672	5668	5665	5662	5659	5655	5652	5649	5646
823.0	5642	5639	5636	5633	5629	5626	5623	5620	5617	5613
824.0	5610	5607	5604	5600	5597	5594	5591	5588	5584	5581
825.0	5578	5575	5571	5568	5565	5562	5558	5555	5552	5549
826.0	5546	5542	5539	5536	5533	5529	5526	5523	5520	5517
827.0	5513	5510	5507	5504	5501	5497	5494	5491	5488	5484
828.0	5481	5478	5475	5472	5468	5465	5462	5459	5455	5452
829.0	5449	5446	5443	5439	5436	5433	5430	5427	5423	5420
830.0	5417	5414	5411	5407	5404	5401	5398	5394	5391	5388
831.0	5385	5382	5378	5375	5372	5369	5366	5362	5359	5356
832.0	5353	5350	5346	5343	5340	5337	5334	5330	5327	5324
833.0	5321	5318	5314	5311	5308	5305	5302	5298	5295	5292
834.0	5289	5286	5282	5279	5276	5273	5270	5266	5263	5260
835.0	5257	5254	5250	5247	5244	5241	5238	5234	5231	5228
836.0	5225	5222	5219	5215	5212	5209	5206	5203	5199	5196
837.0	5193	5190	5187	5183	5180	5177	5174	5171	5168	5164
838.0	5161	5158	5155	5152	5148	5145	5142	5139	5136	5133
839.0	5129	5126	5123	5120	5117	5113	5110	5107	5104	5101
840.0	5098	5094	5091	5088	5085	5082	5078	5075	5072	5069
841.0	5066	5063	5059	5056	5053	5050	5047	5044	5040	5037
842.0	5034	5031	5028	5024	5021	5018	5015	5012	5009	5005
843.0	5002	4999	4996	4993	4990	4986	4983	4980	4977	4974
844.0	4971	4967	4964	4961	4958	4955	4952	4948	4945	4942
845.0	4939	4936	4933	4929	4926	4923	4920	4917	4914	4910
846.0	4907	4904	4901	4898	4895	4892	4888	4885	4882	4879
847.0	4876	4873	4869	4866	4863	4860	4857	4854	4850	4847
848.0	4844	4841	4838	4835	4832	4828	4825	4822	4819	4816
849.0	4813	4810	4806	4803	4800	4797	4794	4791	4787	4784
850.0	4781	4778	4775	4772	4769	4765	4762	4759	4756	4753
851.0	4750	4747	4743	4740	4737	4734	4731	4728	4725	4721
852.0	4718	4715	4712	4709	4706	4703	4699	4696	4693	4690
853.0	4687	4684	4681	4677	4674	4671	4668	4665	4662	4659
854.0	4655	4652	4649	4646	4643	4640	4637	4634	4630	4627
855.0	4624	4621	4618	4615	4612	4608	4605	4602	4599	4596
856.0	4593	4590	4587	4583	4580	4577	4574	4571	4568	4565
857.0	4561	4558	4555	4552	4549	4546	4543	4540	4536	4533
858.0	4530	4527	4524	4521	4518	4515	4511	4508	4505	4502
859.0	4499	4496	4493	4490	4487	4483	4480	4477	4474	4471
860.0	4468	4465	4462	4458	4455	4452	4449	4446	4443	4440
861.0	4437	4433	4430	4427	4424	4421	4418	4415	4412	4409
862.0	4405	4402	4399	4396	4393	4390	4387	4384	4381	4377
863.0	4374	4371	4368	4365	4362	4359	4356	4353	4349	4346
864.0	4343	4340	4337	4334	4331	4328	4325	4322	4318	4315
865.0	4312	4309	4306	4303	4300	4297	4294	4290	4287	4284
866.0	4281	4278	4275	4272	4269	4266	4263	4259	4256	4253
867.0	4250	4247	4244	4241	4238	4235	4232	4229	4225	4222
868.0	4219	4216	4213	4210	4207	4204	4201	4198	4194	4191
869.0	4188	4185	4182	4179	4176	4173	4170	4167	4164	4160
870.0	4157	4154	4151	4148	4145	4142	4139	4136	4133	4130
871.0	4126	4123	4120	4117	4114	4111	4108	4105	4102	4099
872.0	4096	4093	4089	4086	4083	4080	4077	4074	4071	4068
873.0	4065	4062	4059	4056	4052	4049	4046	4043	4040	4037
874.0	4034	4031	4028	4025	4022	4019	4016	4012	4009	4006
875.0	4003	4000	3997	3994	3991	3988	3985	3982	3979	3976
876.0	3972	3969	3966	3963	3960	3957	3954	3951	3948	3945
877.0	3942	3939	3936	3933	3930	3926	3923	3920	3917	3914
878.0	3911	3908	3905	3902	3899	3896	3893	3890	3887	3884
879.0	3880	3877	3874	3871	3868	3865	3862	3859	3856	3853
880.0	3850	3847	3844	3841	3838	3835	3831	3828	3825	3822
881.0	3819	3816	3813	3810	3807	3804	3801	3798	3795	3792
882.0	3789	3786	3783	3779	3776	3773	3770	3767	3764	3761
883.0	3758	3755	3752	3749	3746	3743	3740	3737	3734	3731
884.0	3728	3725	3721	3718	3715	3712	3709	3706	3703	3700
885.0	3697	3694	3691	3688	3685	3682	3679	3676	3673	3670
886.0	3667	3664	3661	3658	3654	3651	3648	3645	3642	3639
887.0	3636	3633	3630	3627	3624	3621	3618	3615	3612	3609
888.0	3606	3603	3600	3597	3594	3591	3588	3585	3581	3578
889.0	3575	3572	3569	3566	3563	3560	3557	3554	3551	3548
890.0	3545	3542	3539	3536	3533	3530	3527	3524	3521	3518
891.0	3515	3512	3509	3506	3503	3500	3497	3494	3491	3487
892.0	3484	3481	3478	3475	3472	3469	3466	3463	3460	3457
893.0	3454	3451	3448	3445	3442	3439	3436	3433	3430	3427
894.0	3424	3421	3418	3415	3412	3409	3406	3403	3400	3397
895.0	3394	3391	3388	3385	3382	3379	3376	3373	3370	3367
896.0	3364	3361	3358	3355	3351	3348	3345	3342	3339	3336
897.0	3333	3330	3327	3324	3321	3318	3315	3312	3309	3306
898.0	3303	3300	3297	3294	3291	3288	3285	3282	3279	3276
899.0	3273	3270	3267	3264	3261	3258	3255	3252	3249	3246
900.0	3243	3240	3237	3234	3231	3228	3225	3222	3219	3216
901.0	3213	3210	3207	3204	3201	3198	3195	3192	3189	3186
902.0	3183	3180	3177	3174	3171	3168	3165	3162	3159	3156
903.0	3153	3150	3147	3144	3141	3138	3135	3132	3129	3126
904.0	3123	3120	3117	3114	3111	3108	3105	3102	3099	3096
905.0	3093	3090	3087	3084	3081	3078	3075	3072	3069	3066
906.0	3063	3060	3057	3054	3051	3048	3045	3042	3039	3036
907.0	3033	3030	3027	3024	3021	3018	3015	3012	3009	3006
908.0	3003	3000	2998	2995	2992	2989	2986	2983	2980	2977
909.0	2974	2971	2968	2965	2962	2959	2956	2953	2950	2947
910.0	2944	2941	2938	2935	2932	2929	2926	2923	2920	2917
911.0	2914	2911	2908	2905	2902	2899	2896	2893	2890	2887
912.0	2884	2881	2878	2875	2872	2869	2866	2863	2861	2858
913.0	2855	2852	2849	2846	2843	2840	2837	2834	2831	2828
914.0	2825	2822	2819	2816	2813	2810	2807	2804	2801	2798
915.0	2795	2792	2789	2786	2783	2780	2777	2774	2771	2769
916.0	2766	2763	2760	2757	2754	2751	2748	2745	2742	2739
917.0	2736	2733	2730	2727	2724	2721	2718	2715	2712	2709
918.0	2706	2703	2700	2697	2694	2692	2689	2686	2683	2680
919.0	2677	2674	2671	2668	2665	2662	2659	2656	2653	2650

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
920.0	2647	2644	2641	2638	2635	2632	2629	2627	2624	2621
921.0	2618	2615	2612	2609	2606	2603	2600	2597	2594	2591
922.0	2588	2585	2582	2579	2576	2573	2571	2568	2565	2562
923.0	2559	2556	2553	2550	2547	2544	2541	2538	2535	2532
924.0	2529	2526	2523	2520	2517	2515	2512	2509	2506	2503
925.0	2500	2497	2494	2491	2488	2485	2482	2479	2476	2473
926.0	2470	2468	2465	2462	2459	2456	2453	2450	2447	2444
927.0	2441	2438	2435	2432	2429	2426	2424	2421	2418	2415
928.0	2412	2409	2406	2403	2400	2397	2394	2391	2388	2385
929.0	2382	2380	2377	2374	2371	2368	2365	2362	2359	2356
930.0	2353	2350	2347	2344	2341	2339	2336	2333	2330	2327
931.0	2324	2321	2318	2315	2312	2309	2306	2303	2301	2298
932.0	2295	2292	2289	2286	2283	2280	2277	2274	2271	2268
933.0	2265	2263	2260	2257	2254	2251	2248	2245	2242	2239
934.0	2236	2233	2230	2228	2225	2222	2219	2216	2213	2210
935.0	2207	2204	2201	2198	2195	2193	2190	2187	2184	2181
936.0	2178	2175	2172	2169	2166	2163	2161	2158	2155	2152
937.0	2149	2146	2143	2140	2137	2134	2131	2129	2126	2123
938.0	2120	2117	2114	2111	2108	2105	2102	2099	2097	2094
939.0	2091	2088	2085	2082	2079	2076	2073	2070	2068	2065
940.0	2062	2059	2056	2053	2050	2047	2044	2041	2039	2036
941.0	2033	2030	2027	2024	2021	2018	2015	2012	2010	2007
942.0	2004	2001	1998	1995	1992	1989	1986	1983	1981	1978
943.0	1975	1972	1969	1966	1963	1960	1957	1955	1952	1949
944.0	1946	1943	1940	1937	1934	1931	1928	1926	1923	1920
945.0	1917	1914	1911	1908	1905	1902	1900	1897	1894	1891
946.0	1888	1885	1882	1879	1876	1874	1871	1868	1865	1862
947.0	1859	1856	1853	1851	1848	1845	1842	1839	1836	1833
948.0	1830	1827	1825	1822	1819	1816	1813	1810	1807	1804
949.0	1802	1799	1796	1793	1790	1787	1784	1781	1779	1776
950.0	1773	1770	1767	1764	1761	1758	1755	1753	1750	1747
951.0	1744	1741	1738	1735	1732	1730	1727	1724	1721	1718
952.0	1715	1712	1710	1707	1704	1701	1698	1695	1692	1689
953.0	1687	1684	1681	1678	1675	1672	1669	1666	1664	1661
954.0	1658	1655	1652	1649	1646	1644	1641	1638	1635	1632
955.0	1629	1626	1623	1621	1618	1615	1612	1609	1606	1603
956.0	1601	1598	1595	1592	1589	1586	1583	1581	1578	1575
957.0	1572	1569	1566	1563	1560	1558	1555	1552	1549	1546
958.0	1543	1540	1538	1535	1532	1529	1526	1523	1520	1518
959.0	1515	1512	1509	1506	1503	1500	1498	1495	1492	1489
960.0	1486	1483	1481	1478	1475	1472	1469	1466	1463	1461
961.0	1458	1455	1452	1449	1446	1443	1441	1438	1435	1432
962.0	1429	1426	1424	1421	1418	1415	1412	1409	1406	1404
963.0	1401	1398	1395	1392	1389	1387	1384	1381	1378	1375
964.0	1372	1369	1367	1364	1361	1358	1355	1352	1350	1347
965.0	1344	1341	1338	1335	1333	1330	1327	1324	1321	1318
966.0	1315	1313	1310	1307	1304	1301	1298	1296	1293	1290
967.0	1287	1284	1281	1279	1276	1273	1270	1267	1264	1262
968.0	1259	1256	1253	1250	1247	1245	1242	1239	1236	1233
969.0	1230	1228	1225	1222	1219	1216	1213	1211	1208	1205
970.0	1202	1199	1196	1194	1191	1188	1185	1182	1179	1177
971.0	1174	1171	1168	1165	1163	1160	1157	1154	1151	1148
972.0	1146	1143	1140	1137	1134	1131	1129	1126	1123	1120
973.0	1117	1115	1112	1109	1106	1103	1100	1098	1095	1092
974.0	1089	1086	1084	1081	1078	1075	1072	1069	1067	1064
975.0	1061	1058	1055	1053	1050	1047	1044	1041	1038	1036
976.0	1033	1030	1027	1024	1022	1019	1016	1013	1010	1007
977.0	1005	1002	999	996	993	991	988	985	982	979
978.0	977	974	971	968	965	962	960	957	954	951
979.0	948	946	943	940	937	934	932	929	926	923
980.0	920	918	915	912	909	906	904	901	898	895
981.0	892	890	887	884	881	878	876	873	870	867
982.0	864	861	859	856	853	850	847	845	842	839
983.0	836	834	831	828	825	822	820	817	814	811
984.0	808	806	803	800	797	794	792	789	786	783
985.0	780	778	775	772	769	766	764	761	758	755
986.0	752	750	747	744	741	738	736	733	730	727
987.0	725	722	719	716	713	711	708	705	702	699
988.0	697	694	691	688	685	683	680	677	674	672
989.0	669	666	663	660	658	655	652	649	647	644
990.0	641	638	635	633	630	627	624	621	619	616
991.0	613	610	608	605	602	599	596	594	591	588
992.0	585	583	580	577	574	571	569	566	563	560
993.0	558	555	552	549	546	544	541	538	535	533
994.0	530	527	524	521	519	516	513	510	508	505
995.0	502	499	497	494	491	488	485	483	480	477
996.0	474	472	469	466	463	461	458	455	452	449
997.0	447	444	441	438	436	433	430	427	425	422
998.0	419	416	414	411	408	405	402	400	397	394
999.0	391	389	386	383	380	378	375	372	369	367
1000.0	364	361	358	356	353	350	347	344	342	339
1001.0	336	333	331	328	325	322	320	317	314	311
1002.0	309	306	303	300	298	295	292	289	287	284
1003.0	281	278	276	273	270	267	265	262	259	256
1004.0	254	251	248	245	243	240	237	234	232	229
1005.0	226	223	221	218	215	212	210	207	204	201
1006.0	199	196	193	190	188	185	182	179	177	174
1007.0	171	168	166	163	160	157	155	152	149	146
1008.0	144	141	138	135	133	130	127	124	122	119
1009.0	116	114	111	108	105	103	100	97	94	92
1010.0	89	86	83	81	78	75	72	70	67	64
1011.0	61	59	56	53	51	48	45	42	40	37
1012.0	34	31	29	26	23	20	18	15	12	10
1013.0	7	4	1	-1	-4	-7	-10	-12	-15	-18
1014.0	-20	-23	-26	-29	-31	-34	-37	-40	-42	-45
1015.0	-48	-50	-53	-56	-59	-61	-64	-67	-70	-72
1016.0	-75	-78	-80	-83	-86	-89	-91	-94	-97	-100
1017.0	-102	-105	-108	-110	-113	-116	-119	-121	-124	-127
1018.0	-129	-132	-135	-138	-140	-143	-146	-149	-151	-154
1019.0	-157	-159	-162	-165	-168	-170	-173	-176	-178	-181

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P,mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
1020.0	-184	-187	-189	-192	-195	-197	-200	-203	-206	-208
1021.0	-211	-214	-216	-219	-222	-225	-228	-230	-233	-235
1022.0	-238	-241	-244	-246	-249	-252	-254	-257	-260	-263
1023.0	-265	-268	-271	-273	-276	-279	-282	-284	-287	-290
1024.0	-292	-295	-298	-300	-303	-306	-309	-311	-314	-317
1025.0	-319	-322	-325	-328	-330	-333	-336	-338	-341	-344
1026.0	-346	-349	-352	-355	-357	-360	-363	-365	-368	-371
1027.0	-373	-376	-379	-382	-384	-387	-390	-392	-395	-398
1028.0	-400	-403	-406	-409	-411	-414	-417	-419	-422	-425
1029.0	-427	-430	-433	-436	-438	-441	-444	-446	-449	-452
1030.0	-454	-457	-460	-463	-465	-468	-471	-473	-476	-479
1031.0	-481	-484	-487	-489	-492	-495	-498	-500	-503	-506
1032.0	-508	-511	-514	-516	-519	-522	-524	-527	-530	-532
1033.0	-535	-538	-541	-543	-546	-549	-551	-554	-557	-559
1034.0	-562	-565	-567	-570	-573	-575	-578	-581	-584	-586
1035.0	-589	-592	-594	-597	-600	-602	-605	-608	-610	-613
1036.0	-616	-618	-621	-624	-626	-629	-632	-635	-637	-640
1037.0	-643	-645	-648	-651	-653	-656	-659	-661	-664	-667
1038.0	-669	-672	-675	-677	-680	-683	-685	-688	-691	-693
1039.0	-696	-699	-701	-704	-707	-710	-712	-715	-718	-720
1040.0	-723	-726	-728	-731	-734	-736	-739	-742	-744	-747
1041.0	-750	-752	-755	-758	-760	-763	-766	-768	-771	-774
1042.0	-776	-779	-782	-784	-787	-790	-792	-795	-798	-800
1043.0	-803	-806	-808	-811	-814	-816	-819	-822	-824	-827
1044.0	-830	-832	-835	-838	-840	-843	-846	-848	-851	-854
1045.0	-856	-859	-862	-864	-867	-870	-872	-875	-878	-880
1046.0	-883	-886	-888	-891	-894	-896	-899	-902	-904	-907
1047.0	-910	-912	-915	-918	-920	-923	-926	-928	-931	-933
1048.0	-936	-939	-941	-944	-947	-949	-952	-955	-957	-960
1049.0	-963	-965	-968	-971	-973	-976	-979	-981	-984	-987
1050.0	-989	-992	-995	-997	-1000	-1003	-1005	-1008	-1010	-1013
1051.0	-1016	-1018	-1021	-1024	-1026	-1029	-1032	-1034	-1037	-1040
1052.0	-1042	-1045	-1048	-1050	-1053	-1056	-1058	-1061	-1063	-1066
1053.0	-1069	-1071	-1074	-1077	-1079	-1082	-1085	-1087	-1090	-1093
1054.0	-1095	-1098	-1101	-1103	-1106	-1108	-1111	-1114	-1116	-1119
1055.0	-1122	-1124	-1127	-1130	-1132	-1135	-1138	-1140	-1143	-1145
1056.0	-1148	-1151	-1153	-1156	-1159	-1161	-1164	-1167	-1169	-1172
1057.0	-1174	-1177	-1180	-1182	-1185	-1188	-1190	-1193	-1196	-1198
1058.0	-1201	-1203	-1206	-1209	-1211	-1214	-1217	-1219	-1222	-1225
1059.0	-1227	-1230	-1232	-1235	-1238	-1240	-1243	-1246	-1248	-1251
1060.0	-1254	-1256	-1259	-1261	-1264	-1267	-1269	-1272	-1275	-1277
1061.0	-1280	-1283	-1285	-1288	-1290	-1293	-1296	-1298	-1301	-1304
1062.0	-1306	-1309	-1311	-1314	-1317	-1319	-1322	-1325	-1327	-1330
1063.0	-1332	-1335	-1338	-1340	-1343	-1346	-1348	-1351	-1353	-1356
1064.0	-1359	-1361	-1364	-1367	-1369	-1372	-1374	-1377	-1380	-1382
1065.0	-1385	-1388	-1390	-1393	-1395	-1398	-1401	-1403	-1406	-1409
1066.0	-1411	-1414	-1416	-1419	-1422	-1424	-1427	-1430	-1432	-1435
1067.0	-1437	-1440	-1443	-1445	-1448	-1450	-1453	-1456	-1458	-1461
1068.0	-1464	-1466	-1469	-1471	-1474	-1477	-1479	-1482	-1485	-1487
1069.0	-1490	-1492	-1495	-1498	-1500	-1503	-1505	-1508	-1511	-1513
1070.0	-1516	-1518	-1521	-1524	-1526	-1529	-1532	-1534	-1537	-1539
1071.0	-1542	-1545	-1547	-1550	-1552	-1555	-1558	-1560	-1563	-1565
1072.0	-1568	-1571	-1573	-1576	-1579	-1581	-1584	-1586	-1589	-1592
1073.0	-1594	-1597	-1599	-1602	-1605	-1607	-1610	-1612	-1615	-1618
1074.0	-1620	-1623	-1625	-1628	-1631	-1633	-1636	-1638	-1641	-1644
1075.0	-1646	-1649	-1651	-1654	-1657	-1659	-1662	-1664	-1667	-1670
1076.0	-1672	-1675	-1678	-1680	-1683	-1685	-1688	-1691	-1693	-1696
1077.0	-1698	-1701	-1704	-1706	-1709	-1711	-1714	-1716	-1719	-1722
1078.0	-1724	-1727	-1729	-1732	-1735	-1737	-1740	-1742	-1745	-1748
1079.0	-1750	-1753	-1755	-1758	-1761	-1763	-1766	-1768	-1771	-1774
1080.0	-1776	-1779	-1781	-1784	-1787	-1789	-1792	-1794	-1797	-1800
1081.0	-1802	-1805	-1807	-1810	-1812	-1815	-1818	-1820	-1823	-1825
1082.0	-1828	-1831	-1833	-1836	-1838	-1841	-1844	-1846	-1849	-1851
1083.0	-1854	-1857	-1859	-1862	-1864	-1867	-1869	-1872	-1875	-1877
1084.0	-1880	-1882	-1885	-1888	-1890	-1893	-1895	-1898	-1900	-1903
1085.0	-1906	-1908	-1911	-1913	-1916	-1919	-1921	-1924	-1926	-1929
1086.0	-1931	-1934	-1937	-1939	-1942	-1944	-1947	-1950	-1952	-1955
1087.0	-1957	-1960	-1962	-1965	-1968	-1970	-1973	-1975	-1978	-1980
1088.0	-1983	-1986	-1988	-1991	-1993	-1996	-1999	-2001	-2004	-2006
1089.0	-2009	-2011	-2014	-2017	-2019	-2022	-2024	-2027	-2029	-2032
1090.0	-2035	-2037	-2040	-2042	-2045	-2047	-2050	-2053	-2055	-2058
1091.0	-2061	-2063	-2065	-2068	-2071	-2073	-2076	-2078	-2081	-2083
1092.0	-2086	-2089	-2091	-2094	-2096	-2099	-2101	-2104	-2107	-2109
1093.0	-2112	-2114	-2117	-2119	-2122	-2125	-2127	-2130	-2132	-2135
1094.0	-2137	-2140	-2143	-2145	-2148	-2150	-2153	-2155	-2158	-2160
1095.0	-2163	-2166	-2168	-2171	-2173	-2176	-2178	-2181	-2184	-2186
1096.0	-2189	-2191	-2194	-2196	-2199	-2202	-2204	-2207	-2209	-2212
1097.0	-2214	-2217	-2219	-2222	-2225	-2227	-2230	-2232	-2235	-2237
1098.0	-2240	-2242	-2245	-2248	-2250	-2253	-2255	-2258	-2260	-2263
1099.0	-2266	-2268	-2271	-2273	-2276	-2278	-2281	-2283	-2286	-2289
1100.0	-2291	-2294	-2296	-2299	-2301	-2304	-2306	-2309	-2312	-2314
1101.0	-2317	-2319	-2322	-2324	-2327	-2329	-2332	-2334	-2337	-2340
1102.0	-2342	-2345	-2347	-2350	-2352	-2355	-2357	-2360	-2363	-2365
1103.0	-2368	-2370	-2373	-2375	-2378	-2380	-2383	-2385	-2388	-2391
1104.0	-2393	-2396	-2398	-2401	-2403	-2406	-2408	-2411	-2414	-2416
1105.0	-2419	-2421	-2424	-2426	-2429	-2431	-2434	-2436	-2439	-2441
1106.0	-2444	-2447	-2449	-2452	-2454	-2457	-2459	-2462	-2464	-2467
1107.0	-2469	-2472	-2475	-2477	-2480	-2482	-2485	-2487	-2490	-2492
1108.0	-2495	-2497	-2500	-2503	-2505	-2508	-2510	-2513	-2515	-2518
1109.0	-2520	-2523	-2525	-2528	-2530	-2533	-2536	-2538	-2541	-2543
1110.0	-2546	-2548	-2551	-2553	-2556	-2558	-2561	-2563	-2566	-2568
1111.0	-2571	-2574	-2576	-2579	-2581	-2584	-2586	-2589	-2591	-2594
1112.0	-2596	-2599	-2601	-2604	-2606	-2609	-2612	-2614	-2617	-2619
1113.0	-2622	-2624	-2627	-2629	-2632	-2634	-2637	-2639	-2642	-2644
1114.0	-2647	-2650	-2652	-2655	-2657	-2660	-2662	-2665	-2667	-2670
1115.0	-2672	-2675	-2677	-2680	-2682	-2685	-2687	-2690	-2692	-2695
1116.0	-2698	-2700	-2703	-2705	-2708	-2710	-2713	-2715	-2718	-2720
1117.0	-2723	-2725	-2728	-2730	-2733	-2735	-2738	-2740	-2743	-2745
1118.0	-2748	-2751	-2753	-2756	-2758	-2761	-2763	-2766	-2768	-2771
1119.0	-2773	-2776	-2778	-2781	-2783	-2786	-2788	-2791	-2793	-2796

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
1120.0	-2798	-2801	-2803	-2806	-2808	-2811	-2814	-2816	-2819	-2821
1121.0	-2824	-2826	-2829	-2831	-2834	-2836	-2839	-2841	-2844	-2846
1122.0	-2849	-2851	-2854	-2856	-2859	-2861	-2864	-2866	-2869	-2871
1123.0	-2874	-2876	-2879	-2881	-2884	-2886	-2889	-2891	-2894	-2896
1124.0	-2899	-2901	-2904	-2907	-2909	-2912	-2914	-2917	-2919	-2922
1125.0	-2924	-2927	-2929	-2932	-2934	-2937	-2939	-2942	-2944	-2947
1126.0	-2949	-2952	-2954	-2957	-2959	-2962	-2964	-2967	-2969	-2972
1127.0	-2974	-2977	-2979	-2982	-2984	-2987	-2989	-2992	-2994	-2997
1128.0	-2999	-3002	-3004	-3007	-3009	-3012	-3014	-3017	-3019	-3022
1129.0	-3024	-3027	-3029	-3032	-3034	-3037	-3039	-3042	-3044	-3047
1130.0	-3049	-3052	-3054	-3057	-3059	-3062	-3064	-3067	-3069	-3072
1131.0	-3074	-3077	-3079	-3082	-3084	-3087	-3089	-3092	-3094	-3097
1132.0	-3099	-3102	-3104	-3107	-3109	-3112	-3114	-3117	-3119	-3122
1133.0	-3124	-3127	-3129	-3132	-3134	-3137	-3139	-3142	-3144	-3147
1134.0	-3149	-3152	-3154	-3157	-3159	-3162	-3164	-3167	-3169	-3172
1135.0	-3174	-3177	-3179	-3182	-3184	-3187	-3189	-3192	-3194	-3197
1136.0	-3199	-3202	-3204	-3206	-3209	-3211	-3214	-3216	-3219	-3221
1137.0	-3224	-3226	-3229	-3231	-3234	-3236	-3239	-3241	-3244	-3246
1138.0	-3249	-3251	-3254	-3256	-3259	-3261	-3264	-3266	-3269	-3271
1139.0	-3274	-3276	-3279	-3281	-3284	-3286	-3289	-3291	-3293	-3296
1140.0	-3298	-3301	-3303	-3306	-3308	-3311	-3313	-3316	-3318	-3321
1141.0	-3323	-3326	-3328	-3331	-3333	-3336	-3338	-3341	-3343	-3346
1142.0	-3348	-3351	-3353	-3356	-3358	-3360	-3363	-3365	-3368	-3370
1143.0	-3373	-3375	-3378	-3380	-3383	-3385	-3388	-3390	-3393	-3395
1144.0	-3398	-3400	-3403	-3405	-3408	-3410	-3412	-3415	-3417	-3420
1145.0	-3422	-3425	-3427	-3430	-3432	-3435	-3437	-3440	-3442	-3445
1146.0	-3447	-3450	-3452	-3454	-3457	-3459	-3462	-3464	-3467	-3469
1147.0	-3472	-3474	-3477	-3479	-3482	-3484	-3487	-3489	-3492	-3494
1148.0	-3496	-3499	-3501	-3504	-3506	-3509	-3511	-3514	-3516	-3519
1149.0	-3521	-3524	-3526	-3529	-3531	-3533	-3536	-3538	-3541	-3543
1150.0	-3546	-3548	-3551	-3553	-3556	-3558	-3561	-3563	-3566	-3568
1151.0	-3570	-3573	-3575	-3578	-3580	-3583	-3585	-3588	-3590	-3593
1152.0	-3595	-3598	-3600	-3602	-3605	-3607	-3610	-3612	-3615	-3617
1153.0	-3620	-3622	-3625	-3627	-3630	-3632	-3634	-3637	-3639	-3642
1154.0	-3644	-3647	-3649	-3652	-3654	-3657	-3659	-3661	-3664	-3666
1155.0	-3669	-3671	-3674	-3676	-3679	-3681	-3684	-3686	-3688	-3691
1156.0	-3693	-3696	-3698	-3701	-3703	-3706	-3708	-3711	-3713	-3715
1157.0	-3718	-3720	-3723	-3725	-3728	-3730	-3733	-3735	-3738	-3740
1158.0	-3742	-3745	-3747	-3750	-3752	-3755	-3757	-3760	-3762	-3765
1159.0	-3767	-3769	-3772	-3774	-3777	-3779	-3782	-3784	-3787	-3789
1160.0	-3791	-3794	-3796	-3799	-3801	-3804	-3806	-3809	-3811	-3813
1161.0	-3816	-3818	-3821	-3823	-3826	-3828	-3831	-3833	-3835	-3838
1162.0	-3840	-3843	-3845	-3848	-3850	-3853	-3855	-3857	-3860	-3862
1163.0	-3865	-3867	-3870	-3872	-3875	-3877	-3879	-3882	-3884	-3887
1164.0	-3889	-3892	-3894	-3897	-3899	-3901	-3904	-3906	-3909	-3911
1165.0	-3914	-3916	-3919	-3921	-3923	-3926	-3928	-3931	-3933	-3936
1166.0	-3938	-3940	-3943	-3945	-3948	-3950	-3953	-3955	-3958	-3960
1167.0	-3962	-3965	-3967	-3970	-3972	-3975	-3977	-3979	-3982	-3984
1168.0	-3987	-3989	-3992	-3994	-3996	-3999	-4001	-4004	-4006	-4009
1169.0	-4011	-4013	-4016	-4018	-4021	-4023	-4026	-4028	-4031	-4033
1170.0	-4035	-4038	-4040	-4043	-4045	-4048	-4050	-4052	-4055	-4057
1171.0	-4060	-4062	-4065	-4067	-4069	-4072	-4074	-4077	-4079	-4082
1172.0	-4084	-4086	-4089	-4091	-4094	-4096	-4099	-4101	-4103	-4106
1173.0	-4108	-4111	-4113	-4116	-4118	-4120	-4123	-4125	-4128	-4130
1174.0	-4132	-4135	-4137	-4140	-4142	-4145	-4147	-4149	-4152	-4154
1175.0	-4157	-4159	-4162	-4164	-4166	-4169	-4171	-4174	-4176	-4178
1176.0	-4181	-4183	-4186	-4188	-4191	-4193	-4195	-4198	-4200	-4203
1177.0	-4205	-4208	-4210	-4212	-4215	-4217	-4220	-4222	-4224	-4227
1178.0	-4229	-4232	-4234	-4237	-4239	-4241	-4244	-4246	-4249	-4251
1179.0	-4253	-4256	-4258	-4261	-4263	-4266	-4268	-4270	-4273	-4275
1180.0	-4278	-4280	-4282	-4285	-4287	-4290	-4292	-4295	-4297	-4299
1181.0	-4302	-4304	-4307	-4309	-4311	-4314	-4316	-4319	-4321	-4323
1182.0	-4326	-4328	-4331	-4333	-4336	-4338	-4340	-4343	-4345	-4348
1183.0	-4350	-4352	-4355	-4357	-4360	-4362	-4364	-4367	-4369	-4372
1184.0	-4374	-4376	-4379	-4381	-4384	-4386	-4388	-4391	-4393	-4396
1185.0	-4398	-4401	-4403	-4405	-4408	-4410	-4413	-4415	-4417	-4420
1186.0	-4422	-4425	-4427	-4429	-4432	-4434	-4437	-4439	-4441	-4444
1187.0	-4446	-4449	-4451	-4453	-4456	-4458	-4461	-4463	-4465	-4468
1188.0	-4470	-4473	-4475	-4477	-4480	-4482	-4485	-4487	-4489	-4492
1189.0	-4494	-4497	-4499	-4501	-4504	-4506	-4509	-4511	-4513	-4516
1190.0	-4518	-4521	-4523	-4525	-4528	-4530	-4533	-4535	-4537	-4540
1191.0	-4542	-4545	-4547	-4549	-4552	-4554	-4557	-4559	-4561	-4564
1192.0	-4566	-4569	-4571	-4573	-4576	-4578	-4580	-4583	-4585	-4588
1193.0	-4590	-4592	-4595	-4597	-4600	-4602	-4604	-4607	-4609	-4612
1194.0	-4614	-4616	-4619	-4621	-4624	-4626	-4628	-4631	-4633	-4635
1195.0	-4638	-4640	-4643	-4645	-4647	-4650	-4652	-4655	-4657	-4659
1196.0	-4662	-4664	-4667	-4669	-4671	-4674	-4676	-4678	-4681	-4683
1197.0	-4686	-4688	-4690	-4693	-4695	-4698	-4700	-4702	-4705	-4707
1198.0	-4709	-4712	-4714	-4717	-4719	-4721	-4724	-4726	-4729	-4731
1199.0	-4733	-4736	-4738	-4740	-4743	-4745	-4748	-4750	-4752	-4755



## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN MILLIBARS

P, mb	0	1	2	3	4	5	6	7	8	9
1200.	-4757	-4781	-4805	-4829	-4852	-4876	-4900	-4923	-4947	-4971
1210.	-4994	-5018	-5042	-5065	-5089	-5113	-5136	-5160	-5183	-5207
1220.	-5230	-5254	-5277	-5301	-5324	-5348	-5371	-5394	-5418	-5441
1230.	-5464	-5488	-5511	-5534	-5558	-5581	-5604	-5627	-5651	-5674
1240.	-5697	-5720	-5743	-5767	-5790	-5813	-5836	-5859	-5882	-5905
1250.	-5928	-5951	-5974	-5997	-6020	-6043	-6066	-6089	-6112	-6135
1260.	-6158	-6181	-6204	-6227	-6249	-6272	-6295	-6318	-6341	-6363
1270.	-6386	-6409	-6432	-6454	-6477	-6500	-6522	-6545	-6568	-6590
1280.	-6613	-6635	-6658	-6681	-6703	-6726	-6748	-6771	-6793	-6816
1290.	-6838	-6861	-6883	-6905	-6928	-6950	-6973	-6995	-7017	-7040
1300.	-7062	-7084	-7107	-7129	-7151	-7173	-7196	-7218	-7240	-7262
1310.	-7285	-7307	-7329	-7351	-7373	-7395	-7417	-7440	-7462	-7484
1320.	-7506	-7528	-7550	-7572	-7594	-7616	-7638	-7660	-7682	-7704
1330.	-7725	-7747	-7769	-7791	-7813	-7835	-7857	-7879	-7900	-7922
1340.	-7944	-7966	-7987	-8009	-8031	-8053	-8074	-8096	-8118	-8139
1350.	-8161	-8183	-8204	-8226	-8248	-8269	-8291	-8312	-8334	-8355
1360.	-8377	-8398	-8420	-8441	-8463	-8484	-8506	-8527	-8549	-8570
1370.	-8591	-8613	-8634	-8656	-8677	-8698	-8720	-8741	-8762	-8783
1380.	-8805	-8826	-8847	-8868	-8889	-8911	-8932	-8953	-8974	-8995
1390.	-9017	-9038	-9059	-9080	-9101	-9122	-9143	-9164	-9186	-9207
1400.	-9228	-9249	-9270	-9291	-9312	-9333	-9354	-9374	-9395	-9416
1410.	-9437	-9458	-9479	-9500	-9521	-9542	-9562	-9583	-9604	-9625
1420.	-9646	-9666	-9687	-9708	-9729	-9749	-9770	-9791	-9811	-9832
1430.	-9853	-9873	-9894	-9915	-9935	-9956	-9977	-9997	-10018	-10038
1440.	-10059	-10079	-10100	-10120	-10141	-10161	-10182	-10202	-10223	-10243
1450.	-10264	-10284	-10305	-10325	-10345	-10366	-10386	-10406	-10427	-10447
1460.	-10467	-10488	-10508	-10528	-10549	-10569	-10589	-10609	-10630	-10650
1470.	-10670	-10690	-10710	-10731	-10751	-10771	-10791	-10811	-10831	-10851
1480.	-10872	-10892	-10912	-10932	-10952	-10972	-10992	-11012	-11032	-11052
1490.	-11072	-11092	-11112	-11132	-11152	-11172	-11192	-11212	-11232	-11251
1500.	-11271	-11291	-11311	-11331	-11351	-11371	-11390	-11410	-11430	-11450
1510.	-11470	-11489	-11509	-11529	-11549	-11568	-11588	-11608	-11627	-11647
1520.	-11667	-11686	-11706	-11726	-11745	-11765	-11785	-11804	-11824	-11843
1530.	-11863	-11882	-11902	-11922	-11941	-11961	-11980	-12000	-12019	-12039
1540.	-12058	-12077	-12097	-12116	-12136	-12155	-12175	-12194	-12213	-12233
1550.	-12252	-12271	-12291	-12310	-12329	-12349	-12368	-12387	-12407	-12426
1560.	-12445	-12464	-12484	-12503	-12522	-12541	-12560	-12580	-12599	-12618
1570.	-12637	-12656	-12675	-12695	-12714	-12733	-12752	-12771	-12790	-12809
1580.	-12828	-12847	-12866	-12885	-12904	-12923	-12942	-12961	-12980	-12999
1590.	-13018	-13037	-13056	-13075	-13094	-13113	-13132	-13151	-13170	-13189
1600.	-13208	-13226	-13245	-13264	-13283	-13302	-13321	-13339	-13358	-13377
1610.	-13396	-13414	-13433	-13452	-13471	-13489	-13508	-13527	-13546	-13564
1620.	-13583	-13602	-13620	-13639	-13658	-13676	-13695	-13713	-13732	-13751
1630.	-13769	-13788	-13806	-13825	-13843	-13862	-13881	-13899	-13918	-13936
1640.	-13955	-13973	-13992	-14010	-14029	-14047	-14065	-14084	-14102	-14121
1650.	-14139	-14157	-14176	-14194	-14213	-14231	-14249	-14268	-14286	-14304
1660.	-14323	-14341	-14359	-14378	-14396	-14414	-14432	-14451	-14469	-14487
1670.	-14505	-14524	-14542	-14560	-14578	-14596	-14614	-14633	-14651	-14669
1680.	-14687	-14705	-14723	-14741	-14760	-14778	-14796	-14814	-14832	-14850
1690.	-14868	-14886	-14904	-14922	-14940	-14958	-14976	-14994	-15012	-15030
1700.	-15048	-15066	-15084	-15102	-15120	-15138	-15156	-15174	-15191	-15209
1710.	-15227	-15245	-15263	-15281	-15299	-15317	-15334	-15352	-15370	-15388
1720.	-15406	-15423	-15441	-15459	-15477	-15494	-15512	-15530	-15548	-15565
1730.	-15583	-15601	-15619	-15636	-15654	-15672	-15689	-15707	-15725	-15742
1740.	-15760	-15777	-15795	-15813	-15830	-15848	-15865	-15883	-15901	-15918
1750.	-15936	-15953	-15971	-15988	-16006	-16023	-16041	-16058	-16076	-16093
1760.	-16111	-16128	-16146	-16163	-16180	-16198	-16215	-16233	-16250	-16268
1770.	-16285	-16302	-16320	-16337	-16354	-16372	-16389	-16406		

Table X  
GEOPOTENTIAL ALTITUDE IN FEET AS A FUNCTION OF PRESSURE IN  
INCHES OF MERCURY

GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN INCHES OF MERCURY

P, in. Hg	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009
.250							105015	104929	104844	104759
.260	104674	104590	104506	104423	104339	104256	104174	104091	104009	103928
.270	103846	103765	103685	103604	103524	103444	103365	103285	103206	103128
.280	103049	102971	102894	102816	102739	102662	102585	102509	102433	102357
.290	102281	102206	102131	102056	101982	101907	101833	101760	101686	101613
.300	101540	101467	101395	101322	101250	101179	101107	101036	100965	100894
.310	100824	100753	100683	100613	100544	100474	100405	100336	100267	100199
.320	100131	100063	99995	99927	99860	99792	99725	99659	99592	99526
.330	99460	99394	99328	99262	99197	99132	99067	99002	98938	98873
.340	98809	98745	98681	98618	98555	98491	98428	98366	98303	98240
.350	98178	98116	98054	97993	97931	97870	97808	97747	97687	97626
.360	97565	97505	97445	97385	97325	97266	97206	97147	97088	97029
.370	96970	96911	96853	96795	96737	96679	96621	96563	96506	96448
.380	96391	96334	96277	96220	96164	96107	96051	95995	95939	95883
.390	95827	95772	95716	95661	95606	95551	95496	95442	95387	95333
.400	95278	95224	95170	95116	95063	95009	94956	94902	94849	94796
.410	94743	94691	94638	94586	94533	94481	94429	94377	94325	94273
.420	94222	94170	94119	94068	94017	93966	93915	93864	93813	93763
.430	93713	93662	93612	93562	93512	93463	93413	93363	93314	93265
.440	93216	93166	93117	93069	93020	92971	92923	92874	92826	92778
.450	92730	92682	92634	92586	92539	92491	92444	92397	92349	92302
.460	92255	92209	92162	92115	92069	92022	91976	91929	91883	91837
.470	91791	91745	91700	91654	91608	91563	91518	91472	91427	91382
.480	91337	91292	91248	91203	91158	91114	91070	91025	90981	90937
.490	90893	90849	90805	90761	90718	90674	90631	90587	90544	90501
.500	90458	90415	90372	90329	90286	90243	90201	90158	90116	90074
.510	90031	89989	89947	89905	89863	89822	89780	89738	89697	89655
.520	89614	89572	89531	89490	89449	89408	89367	89326	89285	89245
.530	89204	89164	89123	89083	89042	89002	88962	88922	88882	88842
.540	88802	88763	88723	88683	88644	88604	88565	88526	88487	88447
.550	88408	88369	88330	88291	88253	88214	88175	88137	88098	88060
.560	88021	87983	87945	87907	87869	87831	87793	87755	87717	87679
.570	87642	87604	87567	87529	87492	87454	87417	87380	87343	87306
.580	87269	87232	87195	87158	87121	87085	87048	87012	86975	86939
.590	86902	86866	86830	86794	86758	86722	86686	86650	86614	86578
.600	86542	86507	86471	86435	86400	86365	86329	86294	86259	86223
.610	86188	86153	86118	86083	86048	86014	85979	85944	85909	85875
.620	85840	85806	85771	85737	85703	85668	85634	85600	85566	85532
.630	85498	85464	85430	85396	85363	85329	85295	85262	85228	85195
.640	85161	85128	85095	85061	85028	84995	84962	84929	84896	84863
.650	84830	84797	84764	84731	84699	84666	84634	84601	84569	84536
.660	84504	84471	84439	84407	84375	84343	84310	84278	84246	84214
.670	84183	84151	84119	84087	84056	84024	83992	83961	83929	83898
.680	83866	83835	83804	83772	83741	83710	83679	83648	83617	83586
.690	83555	83524	83493	83462	83432	83401	83370	83340	83309	83279
.700	83248	83218	83187	83157	83127	83096	83066	83036	83006	82976
.710	82946	82916	82886	82856	82826	82796	82766	82737	82707	82677
.720	82648	82618	82589	82559	82530	82500	82471	82442	82412	82383
.730	82354	82325	82296	82267	82237	82208	82180	82151	82122	82093
.740	82064	82035	82007	81978	81949	81921	81892	81864	81835	81807
.750	81778	81750	81722	81694	81665	81637	81609	81581	81553	81525
.760	81497	81469	81441	81413	81385	81357	81329	81302	81274	81246
.770	81219	81191	81164	81136	81109	81081	81054	81026	80999	80972
.780	80944	80917	80890	80863	80836	80809	80782	80754	80728	80701
.790	80674	80647	80620	80593	80566	80540	80513	80486	80460	80433
.800	80406	80380	80353	80327	80301	80274	80248	80221	80195	80169
.810	80143	80116	80090	80064	80038	80012	79986	79960	79934	79908
.820	79882	79856	79831	79805	79779	79753	79728	79702	79676	79651
.830	79625	79599	79574	79548	79523	79498	79472	79447	79422	79396
.840	79371	79346	79321	79295	79270	79245	79220	79195	79170	79145
.850	79120	79095	79070	79045	79020	78996	78971	78946	78921	78897
.860	78872	78847	78823	78798	78774	78749	78725	78700	78676	78651
.870	78627	78603	78578	78554	78530	78506	78482	78457	78433	78409
.880	78385	78361	78337	78313	78289	78265	78241	78217	78193	78170
.890	78146	78122	78098	78074	78051	78027	78003	77980	77956	77933
.900	77909	77886	77862	77839	77815	77792	77769	77745	77722	77699
.910	77675	77652	77629	77606	77583	77559	77536	77513	77490	77467
.920	77444	77421	77398	77375	77352	77330	77307	77284	77261	77238
.930	77216	77193	77170	77147	77125	77102	77080	77057	77034	77012
.940	76989	76967	76944	76922	76900	76877	76855	76833	76810	76788
.950	76766	76744	76721	76699	76677	76655	76633	76611	76589	76567
.960	76544	76522	76501	76479	76457	76435	76413	76391	76369	76347
.970	76326	76304	76282	76260	76239	76217	76195	76174	76152	76131
.980	76109	76087	76066	76044	76023	76002	75980	75959	75937	75916
.990	75895	75873	75852	75831	75810	75788	75767	75746	75725	75704

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN INCHES OF MERCURY

P, in. Hg	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009
1.000	75683	75662	75640	75619	75598	75577	75556	75535	75515	75494
1.010	75473	75452	75431	75410	75389	75369	75348	75327	75306	75286
1.020	75265	75244	75224	75203	75182	75162	75141	75121	75100	75080
1.030	75059	75039	75018	74998	74977	74957	74937	74916	74896	74876
1.040	74856	74835	74815	74795	74775	74755	74734	74714	74694	74674
1.050	74654	74634	74614	74594	74574	74554	74534	74514	74494	74474
1.060	74454	74434	74414	74395	74375	74355	74335	74316	74296	74276
1.070	74256	74237	74217	74197	74178	74158	74139	74119	74100	74080
1.080	74061	74041	74022	74002	73983	73963	73944	73925	73905	73886
1.090	73867	73847	73828	73809	73789	73770	73751	73732	73713	73693
1.100	73674	73655	73636	73617	73598	73579	73560	73541	73522	73503
1.110	73484	73465	73446	73427	73408	73389	73371	73352	73333	73314
1.120	73295	73277	73258	73239	73220	73202	73183	73164	73146	73127
1.130	73108	73090	73071	73053	73034	73016	72997	72979	72960	72942
1.140	72923	72905	72886	72868	72850	72831	72813	72794	72776	72758
1.150	72740	72721	72703	72685	72667	72648	72630	72612	72594	72576
1.160	72558	72540	72521	72503	72485	72467	72449	72431	72413	72395
1.170	72377	72359	72342	72324	72306	72288	72270	72252	72234	72216
1.180	72199	72181	72163	72145	72128	72110	72092	72074	72057	72039
1.190	72021	72004	71986	71969	71951	71933	71916	71898	71881	71863
1.200	71846	71828	71811	71793	71776	71759	71741	71724	71706	71689
1.210	71672	71654	71637	71620	71602	71585	71568	71551	71533	71516
1.220	71499	71482	71465	71447	71430	71413	71396	71379	71362	71345
1.230	71328	71311	71294	71277	71260	71243	71226	71209	71192	71175
1.240	71158	71141	71124	71107	71090	71074	71057	71040	71023	71006
1.250	70990	70973	70956	70939	70923	70906	70889	70872	70856	70839
1.260	70823	70806	70789	70773	70756	70740	70723	70706	70690	70673
1.270	70657	70640	70624	70607	70591	70575	70558	70542	70525	70509
1.280	70493	70476	70460	70444	70427	70411	70395	70378	70362	70346
1.290	70330	70313	70297	70281	70265	70249	70232	70216	70200	70184
1.300	70168	70152	70136	70120	70103	70087	70071	70055	70039	70023
1.310	70007	69991	69975	69959	69943	69928	69912	69896	69880	69864
1.320	69848	69832	69817	69801	69785	69769	69753	69738	69722	69706
1.330	69690	69675	69659	69643	69627	69612	69596	69580	69565	69549
1.340	69534	69518	69502	69487	69471	69456	69440	69425	69409	69394
1.350	69378	69363	69347	69332	69316	69301	69285	69270	69254	69239
1.360	69224	69208	69193	69178	69162	69147	69132	69116	69101	69086
1.370	69070	69055	69040	69025	69010	68994	68979	68964	68949	68934
1.380	68918	68903	68888	68873	68858	68843	68828	68813	68798	68783
1.390	68768	68753	68737	68722	68707	68693	68678	68663	68648	68633
1.400	68618	68603	68588	68573	68558	68543	68528	68514	68499	68484
1.410	68469	68454	68439	68425	68410	68395	68380	68366	68351	68336
1.420	68321	68307	68292	68277	68263	68248	68233	68219	68204	68190
1.430	68175	68160	68146	68131	68117	68102	68087	68073	68058	68044
1.440	68029	68015	68000	67986	67971	67957	67943	67928	67914	67899
1.450	67885	67871	67856	67842	67827	67813	67799	67784	67770	67756
1.460	67741	67727	67713	67699	67684	67670	67656	67642	67627	67613
1.470	67599	67585	67571	67557	67542	67528	67514	67500	67486	67472
1.480	67458	67444	67429	67415	67401	67387	67373	67359	67345	67331
1.490	67317	67303	67289	67275	67261	67247	67233	67219	67206	67192
1.500	67178	67164	67150	67136	67122	67108	67094	67081	67067	67053
1.510	67039	67025	67012	66998	66984	66970	66956	66943	66929	66915
1.520	66902	66888	66874	66860	66847	66833	66819	66806	66792	66779
1.530	66765	66751	66738	66724	66710	66697	66683	66670	66656	66643
1.540	66629	66615	66602	66589	66575	66562	66548	66535	66521	66508
1.550	66494	66481	66467	66454	66441	66427	66414	66400	66387	66374
1.560	66360	66347	66334	66320	66307	66294	66280	66267	66254	66241
1.570	66227	66214	66201	66188	66174	66161	66148	66135	66121	66108
1.580	66095	66082	66069	66056	66042	66029	66016	66003	65990	65977
1.590	65964	65951	65938	65924	65911	65898	65885	65872	65859	65846
1.600	65833	65820	65807	65794	65781	65768	65755	65742	65729	65716
1.610	65704	65691	65678	65665	65652	65639	65626	65613	65600	65588
1.620	65575	65562	65549	65536	65523	65511	65498	65485	65472	65459
1.630	65447	65434	65421	65408	65396	65383	65370	65358	65345	65332
1.640	65319	65307	65294	65281	65269	65256	65243	65231	65218	65206
1.650	65193	65180	65168	65155	65143	65130	65117	65105	65092	65080
1.660	65067	65055	65042	65030	65017	65005	64992	64980	64967	64955
1.670	64942	64930	64917	64905	64893	64880	64868	64855	64843	64830
1.680	64818	64806	64793	64781	64769	64756	64744	64732	64719	64707
1.690	64695	64682	64670	64658	64645	64633	64621	64609	64596	64584
1.700	64572	64560	64547	64535	64523	64511	64499	64486	64474	64462
1.710	64450	64438	64426	64413	64401	64389	64377	64365	64353	64341
1.720	64329	64316	64304	64292	64280	64268	64256	64244	64232	64220
1.730	64208	64196	64184	64172	64160	64148	64136	64124	64112	64100
1.740	64088	64076	64064	64052	64040	64028	64016	64004	63993	63981
1.750	63969	63957	63945	63933	63921	63909	63898	63886	63874	63862
1.760	63850	63838	63827	63815	63803	63791	63779	63768	63756	63744
1.770	63732	63721	63709	63697	63685	63674	63662	63650	63638	63627
1.780	63615	63603	63592	63580	63568	63557	63545	63533	63522	63510
1.790	63499	63487	63475	63464	63452	63441	63429	63417	63406	63394
1.800	63383	63371	63360	63348	63336	63325	63313	63302	63290	63279
1.810	63267	63256	63244	63233	63221	63210	63199	63187	63176	63164
1.820	63153	63141	63130	63118	63107	63096	63084	63073	63061	63050
1.830	63039	63027	63016	63005	62993	62982	62971	62959	62948	62937
1.840	62925	62914	62903	62891	62880	62869	62858	62846	62835	62824
1.850	62813	62801	62790	62779	62768	62756	62745	62734	62723	62712
1.860	62700	62689	62678	62667	62656	62645	62633	62622	62611	62600
1.870	62589	62578	62567	62555	62544	62533	62522	62511	62500	62489
1.880	62478	62467	62456	62445	62434	62423	62412	62401	62390	62379
1.890	62368	62357	62346	62335	62324	62313	62302	62291	62280	62269
1.900	62258	62247	62236	62225	62214	62203	62192	62181	62170	62159
1.910	62148	62137	62126	62115	62104	62093	62083	62072	62062	62051
1.920	62040	62029	62018	62007	61997	61986	61975	61964	61953	61943
1.930	61932	61921	61910	61899	61889	61878	61867	61856	61846	61835
1.940	61824	61814	61803	61792	61781	61771	61760	61749	61739	61728
1.950	61717	61707	61696	61685	61675	61664	61653	61643	61632	61621
1.960	61611	61600	61590	61579	61568	61558	61547	61537	61526	61516
1.970	61505	61494	61484	61473	61463	61452	61442	61431	61421	61410
1.980	61400	61389	61379	61368	61358	61347	61337	61326	61316	61305
1.990	61295	61284	61274	61263	61253	61243	61232	61222	61211	61201

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN INCHES OF MERCURY

P, in. Hg	0.000	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009
2.000	61191	61180	61170	61159	61149	61139	61128	61118	61107	61097
2.010	61087	61076	61066	61056	61045	61035	61025	61014	61004	60994
2.020	60983	60973	60963	60953	60942	60932	60922	60912	60901	60891
2.030	60881	60871	60860	60850	60840	60830	60819	60809	60799	60789
2.040	60779	60768	60758	60748	60738	60728	60717	60707	60697	60687
2.050	60677	60667	60656	60646	60636	60626	60616	60606	60596	60586
2.060	60576	60565	60555	60545	60535	60525	60515	60505	60495	60485
2.070	60475	60465	60455	60445	60435	60425	60415	60405	60395	60385
2.080	60374	60364	60354	60345	60335	60325	60315	60305	60295	60285
2.090	60275	60265	60255	60245	60235	60225	60215	60205	60195	60185
2.100	60175	60165	60156	60146	60136	60126	60116	60106	60096	60086
2.110	60077	60067	60057	60047	60037	60027	60017	60008	59998	59988
2.120	59978	59968	59959	59949	59939	59929	59919	59910	59900	59890
2.130	59880	59871	59861	59851	59841	59831	59822	59812	59802	59793
2.140	59783	59773	59763	59754	59744	59734	59725	59715	59705	59696
2.150	59686	59676	59666	59657	59647	59637	59628	59618	59609	59599
2.160	59589	59580	59570	59560	59551	59541	59532	59522	59512	59503
2.170	59493	59484	59474	59464	59455	59445	59436	59426	59417	59407
2.180	59398	59388	59378	59369	59359	59350	59340	59331	59321	59312
2.190	59302	59293	59283	59274	59264	59255	59245	59236	59226	59217
2.200	59208	59198	59189	59179	59170	59160	59151	59141	59132	59123
2.210	59113	59104	59094	59085	59076	59066	59057	59047	59038	59029
2.220	59019	59010	59000	58991	58982	58972	58963	58954	58944	58935
2.230	58926	58916	58907	58898	58888	58879	58870	58861	58851	58842
2.240	58833	58823	58814	58805	58795	58786	58777	58768	58758	58749
2.250	58740	58731	58721	58712	58703	58694	58685	58675	58666	58657
2.260	58648	58638	58629	58620	58611	58602	58593	58583	58574	58565
2.270	58556	58547	58537	58528	58519	58510	58501	58492	58483	58473
2.280	58464	58455	58446	58437	58428	58419	58410	58401	58391	58382
2.290	58373	58364	58355	58346	58337	58328	58319	58310	58301	58292
2.300	58283	58274	58265	58256	58247	58237	58228	58219	58210	58201
2.310	58192	58183	58174	58165	58156	58147	58138	58129	58120	58111
2.320	58103	58094	58085	58076	58067	58058	58049	58040	58031	58022
2.330	58013	58004	57995	57986	57977	57968	57960	57951	57942	57933
2.340	57924	57915	57906	57897	57888	57880	57871	57862	57853	57844
2.350	57835	57826	57818	57809	57800	57791	57782	57773	57764	57756
2.360	57747	57738	57729	57720	57712	57703	57694	57685	57676	57668
2.370	57659	57650	57641	57633	57624	57615	57606	57598	57589	57580
2.380	57571	57563	57554	57545	57536	57528	57519	57510	57501	57493
2.390	57484	57475	57467	57458	57449	57441	57432	57423	57415	57406
2.400	57397	57388	57380	57371	57363	57354	57345	57337	57328	57319
2.410	57311	57302	57293	57285	57276	57268	57259	57250	57242	57233
2.420	57225	57216	57207	57199	57190	57182	57173	57164	57156	57147
2.430	57139	57130	57122	57113	57104	57096	57087	57079	57070	57062
2.440	57053	57045	57036	57028	57019	57011	57002	56994	56985	56977
2.450	56968	56960	56951	56943	56934	56926	56917	56909	56900	56892
2.460	56883	56875	56867	56858	56850	56841	56833	56824	56816	56807
2.470	56799	56791	56782	56774	56765	56757	56749	56740	56732	56723
2.480	56715	56707	56698	56690	56681	56673	56665	56656	56648	56640
2.490	56631	56623	56615	56606	56598	56589	56581	56573	56564	56556
2.500	56548	56540	56531	56523	56515	56506	56498	56490	56481	56473
2.510	56465	56456	56448	56440	56432	56423	56415	56407	56399	56390
2.520	56382	56374	56366	56357	56349	56341	56333	56324	56316	56308
2.530	56300	56291	56283	56275	56267	56259	56250	56242	56234	56226
2.540	56218	56209	56201	56193	56185	56177	56168	56160	56152	56144
2.550	56136	56128	56119	56111	56103	56095	56087	56079	56071	56063
2.560	56054	56046	56038	56030	56022	56014	56006	55998	55990	55981
2.570	55973	55965	55957	55949	55941	55933	55925	55917	55909	55901
2.580	55892	55884	55876	55868	55860	55852	55844	55836	55828	55820
2.590	55812	55804	55796	55788	55780	55772	55764	55756	55748	55740
2.600	55732	55724	55716	55708	55700	55692	55684	55676	55668	55660
2.610	55652	55644	55636	55628	55620	55612	55604	55596	55588	55580
2.620	55572	55564	55557	55549	55541	55533	55525	55517	55509	55501
2.630	55493	55485	55477	55469	55462	55454	55446	55438	55430	55422
2.640	55414	55406	55398	55391	55383	55375	55367	55359	55351	55343
2.650	55335	55328	55320	55312	55304	55296	55288	55280	55273	55265
2.660	55257	55249	55241	55234	55226	55218	55210	55202	55195	55187
2.670	55179	55171	55163	55155	55148	55140	55132	55125	55117	55109
2.680	55101	55094	55086	55078	55070	55063	55055	55047	55039	55032
2.690	55024	55016	55008	55001	54993	54985	54977	54970	54962	54954
2.700	54947	54939	54931	54923	54916	54908	54900	54893	54885	54877
2.710	54870	54862	54854	54847	54839	54831	54824	54816	54808	54801
2.720	54793	54785	54778	54770	54762	54755	54747	54740	54732	54724
2.730	54717	54709	54701	54694	54686	54679	54671	54663	54656	54648
2.740	54641	54633	54625	54618	54610	54603	54595	54588	54580	54572
2.750	54565	54557	54550	54542	54535	54527	54519	54512	54504	54497
2.760	54489	54482	54474	54467	54459	54452	54444	54437	54429	54422
2.770	54414	54407	54399	54392	54384	54377	54369	54362	54354	54347
2.780	54339	54332	54324	54317	54309	54302	54294	54287	54279	54272
2.790	54264	54257	54249	54242	54235	54227	54220	54212	54205	54197
2.800	54190	54183	54175	54168	54160	54153	54145	54138	54131	54123
2.810	54116	54108	54101	54094	54086	54079	54071	54064	54057	54049
2.820	54042	54034	54027	54020	54012	54005	53998	53990	53983	53976
2.830	53968	53961	53954	53946	53939	53931	53924	53917	53910	53902
2.840	53895	53887	53880	53873	53866	53858	53851	53844	53836	53829
2.850	53822	53814	53807	53800	53793	53785	53778	53771	53763	53756
2.860	53749	53742	53734	53727	53720	53712	53705	53697	53691	53683
2.870	53676	53669	53662	53654	53647	53640	53633	53626	53618	53611
2.880	53604	53597	53589	53582	53575	53568	53561	53553	53546	53539
2.890	53532	53525	53517	53510	53503	53496	53489	53481	53474	53467
2.900	53460	53453	53445	53438	53431	53424	53417	53410	53403	53395
2.910	53388	53381	53374	53367	53360	53352	53345	53338	53331	53324
2.920	53317	53310	53303	53295	53288	53281	53274	53267	53260	53253
2.930	53246	53239	53232	53224	53217	53210	53203	53196	53189	53182
2.940	53175	53168	53161	53154	53147	53139	53132	53125	53118	53111
2.950	53104	53097	53090	53083	53076	53069	53062	53055	53048	53041
2.960	53034	53027	53020	53013	53006	52999	52992	52985	52978	52971
2.970	52964	52957	52950	52943	52936	52929	52922	52915	52908	52901
2.980	52894	52887	52880	52873	52866	52859	52852	52845	52838	52831
2.990	52824	52817	52810	52803	52796	52789	52782	52775	52768	52761

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN INCHES OF MERCURY

P, in. Hg	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
3.00	52754	52685	52616	52547	52479	52411	52342	52275	52207	52139
3.10	52072	52005	51938	51872	51806	51739	51673	51608	51542	51477
3.20	51412	51347	51282	51218	51153	51089	51025	50961	50898	50835
3.30	50771	50709	50646	50583	50521	50459	50397	50335	50273	50212
3.40	50150	50089	50028	49968	49907	49847	49786	49726	49666	49607
3.50	49547	49488	49429	49370	49311	49252	49194	49135	49077	49019
3.60	48961	48903	48846	48788	48731	48674	48617	48560	48504	48447
3.70	48391	48335	48279	48223	48167	48112	48056	48001	47946	47891
3.80	47836	47782	47727	47673	47618	47564	47510	47456	47403	47349
3.90	47296	47242	47189	47136	47083	47031	46978	46926	46873	46821
4.00	46769	46717	46665	46614	46562	46511	46459	46408	46357	46306
4.10	46255	46205	46154	46104	46053	46003	45953	45903	45853	45803
4.20	45734	45685	45635	45586	45537	45488	45439	45390	45341	45293
4.30	45264	45216	45168	45120	45072	45024	44976	44928	44881	44833
4.40	44786	44739	44692	44645	44598	44551	44504	44458	44411	44365
4.50	44318	44272	44226	44180	44134	44089	44043	43997	43952	43906
4.60	43861	43816	43771	43726	43681	43636	43592	43547	43502	43458
4.70	43414	43369	43325	43281	43237	43194	43150	43106	43063	43019
4.80	42976	42932	42889	42846	42803	42760	42717	42674	42632	42589
4.90	42547	42504	42462	42420	42378	42335	42293	42252	42210	42168
5.00	42126	42085	42043	42002	41961	41919	41878	41837	41796	41755
5.10	41714	41674	41633	41592	41552	41511	41471	41431	41390	41350
5.20	41310	41270	41230	41191	41151	41111	41072	41032	40993	40953
5.30	40914	40875	40836	40797	40758	40719	40680	40641	40602	40564
5.40	40525	40487	40448	40410	40372	40333	40295	40257	40219	40181
5.50	40143	40106	40068	40030	39993	39955	39918	39880	39843	39806
5.60	39768	39731	39694	39657	39620	39583	39547	39510	39473	39437
5.70	39400	39364	39327	39291	39255	39218	39182	39146	39110	39074
5.80	39038	39002	38967	38931	38895	38860	38824	38789	38753	38718
5.90	38683	38647	38612	38577	38542	38507	38472	38437	38402	38368
6.00	38333	38298	38264	38229	38195	38160	38126	38092	38057	38023
6.10	37989	37955	37921	37887	37853	37819	37785	37752	37718	37684
6.20	37651	37617	37584	37550	37517	37484	37450	37417	37384	37351
6.30	37318	37285	37252	37219	37186	37153	37121	37088	37055	37023
6.40	36990	36958	36925	36893	36861	36828	36796	36764	36732	36700
6.50	36668	36636	36604	36572	36540	36508	36476	36445	36413	36382
6.60	36350	36318	36287	36256	36224	36193	36162	36130	36099	36068
6.70	36037	36006	35975	35944	35913	35882	35851	35821	35790	35759
6.80	35728	35698	35667	35636	35606	35575	35545	35514	35484	35453
6.90	35423	35393	35363	35332	35302	35272	35242	35212	35182	35152
7.00	35122	35092	35062	35032	35002	34972	34942	34912	34883	34853
7.10	34823	34794	34764	34735	34705	34676	34646	34617	34587	34558
7.20	34529	34499	34470	34441	34412	34382	34353	34324	34295	34266
7.30	34237	34208	34179	34150	34121	34093	34064	34035	34006	33978
7.40	33949	33920	33892	33863	33834	33806	33777	33749	33721	33692
7.50	33664	33635	33607	33579	33551	33522	33494	33466	33438	33410
7.60	33382	33354	33326	33298	33270	33242	33214	33186	33158	33130
7.70	33103	33075	33047	33020	32992	32964	32937	32909	32882	32854
7.80	32827	32799	32772	32744	32717	32690	32662	32635	32608	32580
7.90	32553	32526	32499	32472	32445	32418	32391	32364	32337	32310
8.00	32283	32256	32229	32202	32175	32149	32122	32095	32068	32042
8.10	32015	31988	31962	31935	31909	31882	31856	31829	31803	31776
8.20	31750	31724	31697	31671	31645	31618	31592	31566	31540	31514
8.30	31487	31461	31435	31409	31383	31357	31331	31305	31279	31253
8.40	31227	31202	31176	31150	31124	31098	31073	31047	31021	30996
8.50	30970	30944	30919	30893	30868	30842	30817	30791	30766	30740
8.60	30715	30690	30664	30639	30614	30588	30563	30538	30513	30487
8.70	30462	30437	30412	30387	30362	30337	30312	30287	30262	30237
8.80	30212	30187	30162	30137	30112	30088	30063	30038	30013	29989
8.90	29964	29939	29915	29890	29865	29841	29816	29792	29767	29743
9.00	29718	29694	29669	29645	29621	29596	29572	29548	29523	29499
9.10	29475	29450	29426	29402	29378	29354	29330	29306	29281	29257
9.20	29233	29209	29185	29161	29137	29113	29090	29066	29042	29018
9.30	28994	28970	28946	28923	28899	28875	28851	28828	28804	28780
9.40	28757	28733	28710	28686	28663	28639	28616	28592	28569	28545
9.50	28522	28498	28475	28452	28428	28405	28382	28358	28335	28312
9.60	28289	28265	28242	28219	28196	28173	28150	28126	28103	28080
9.70	28057	28034	28011	27988	27965	27942	27919	27897	27874	27851
9.80	27828	27805	27782	27760	27737	27714	27691	27669	27646	27623
9.90	27601	27578	27555	27533	27510	27488	27465	27443	27420	27398
10.00	27375	27353	27330	27308	27285	27263	27241	27218	27196	27174
10.10	27151	27129	27107	27085	27062	27040	27018	26996	26974	26951
10.20	26929	26907	26885	26863	26841	26819	26797	26775	26753	26731
10.30	26709	26687	26665	26643	26622	26600	26578	26556	26534	26512
10.40	26491	26469	26447	26425	26404	26382	26360	26339	26317	26296
10.50	26274	26252	26231	26209	26188	26166	26145	26123	26102	26080
10.60	26059	26037	26016	25995	25973	25952	25931	25909	25888	25867
10.70	25845	25824	25803	25782	25760	25739	25718	25697	25676	25655
10.80	25633	25612	25591	25570	25549	25528	25507	25486	25465	25444
10.90	25423	25402	25381	25360	25340	25319	25298	25277	25256	25235
11.00	25214	25194	25173	25152	25131	25111	25090	25069	25049	25028
11.10	25007	24986	24966	24945	24925	24904	24884	24863	24843	24822
11.20	24802	24781	24761	24740	24720	24699	24679	24659	24638	24618
11.30	24597	24577	24557	24536	24516	24496	24476	24455	24435	24415
11.40	24395	24374	24354	24334	24314	24294	24274	24254	24233	24213
11.50	24193	24173	24153	24133	24113	24093	24073	24053	24033	24013
11.60	23993	23974	23954	23934	23914	23894	23874	23854	23835	23815
11.70	23795	23775	23755	23736	23716	23696	23676	23657	23637	23617
11.80	23598	23578	23559	23539	23519	23500	23480	23461	23441	23422
11.90	23402	23382	23363	23344	23324	23305	23285	23266	23246	23227
12.00	23208	23188	23169	23149	23130	23111	23091	23072	23053	23034
12.10	23014	22995	22976	22957	22937	22918	22899	22880	22861	22842
12.20	22823	22803	22784	22765	22746	22727	22708	22689	22670	22651
12.30	22632	22613	22594	22575	22556	22537	22518	22499	22480	22461
12.40	22443	22424	22405	22386	22367	22348	22330	22311	22292	22273
12.50	22254	22235	22216	22197	22178	22159	22142	22124	22105	22086
12.60	22068	22049	22030	22012	21993	21975	21956	21937	21919	21900
12.70	21882	21863	21845	21826	21808	21789	21771	21753	21734	21716
12.80	21697	21679	21661	21642	21624	21606	21587	21569	21551	21532
12.90	21514	21496	21477	21459	21441	21423	21405	21386	21368	21350



## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN INCHES OF MERCURY

P, in. Hg	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
13.00	21332	21314	21295	21277	21259	21241	21223	21205	21187	21169
13.10	21151	21133	21115	21097	21079	21061	21043	21025	21007	20989
13.20	20971	20953	20935	20917	20899	20881	20863	20845	20828	20810
13.30	20792	20774	20756	20738	20721	20703	20685	20667	20650	20632
13.40	20614	20596	20579	20561	20543	20526	20508	20490	20473	20455
13.50	20437	20420	20402	20385	20367	20349	20332	20314	20297	20279
13.60	20262	20244	20227	20209	20192	20174	20157	20139	20122	20105
13.70	20087	20070	20052	20035	20018	20000	19983	19965	19948	19931
13.80	19914	19896	19879	19862	19844	19827	19810	19793	19775	19758
13.90	19741	19724	19707	19689	19672	19655	19638	19621	19604	19587
14.00	19569	19552	19535	19518	19501	19484	19467	19450	19433	19416
14.10	19399	19382	19365	19348	19331	19314	19297	19280	19263	19246
14.20	19229	19212	19195	19179	19162	19145	19128	19111	19094	19077
14.30	19061	19044	19027	19010	18993	18977	18960	18943	18926	18910
14.40	18893	18876	18860	18843	18826	18809	18793	18776	18759	18743
14.50	18726	18710	18693	18676	18660	18643	18627	18610	18593	18577
14.60	18560	18544	18527	18511	18494	18478	18461	18445	18428	18412
14.70	18395	18379	18363	18346	18330	18313	18297	18281	18264	18248
14.80	18232	18215	18199	18182	18166	18150	18134	18117	18101	18085
14.90	18068	18052	18036	18020	18003	17987	17971	17955	17939	17922
15.00	17906	17890	17874	17858	17842	17825	17809	17793	17777	17761
15.10	17745	17729	17713	17697	17681	17665	17648	17632	17616	17600
15.20	17584	17568	17552	17536	17520	17504	17488	17473	17457	17441
15.30	17425	17409	17393	17377	17361	17345	17329	17314	17298	17282
15.40	17266	17250	17234	17219	17203	17187	17171	17155	17140	17124
15.50	17108	17092	17077	17061	17045	17029	17014	16998	16982	16967
15.60	16951	16935	16920	16904	16888	16873	16857	16841	16826	16810
15.70	16795	16779	16763	16748	16732	16717	16701	16686	16670	16655
15.80	16639	16624	16608	16593	16577	16562	16546	16531	16515	16500
15.90	16484	16469	16454	16438	16423	16407	16392	16377	16361	16346
16.00	16331	16315	16300	16284	16269	16254	16239	16223	16208	16193
16.10	16177	16162	16147	16132	16116	16101	16086	16071	16055	16040
16.20	16025	16010	15995	15979	15964	15949	15934	15919	15904	15888
16.30	15873	15858	15843	15828	15813	15798	15783	15768	15753	15738
16.40	15722	15707	15692	15677	15662	15647	15632	15617	15602	15587
16.50	15572	15557	15542	15527	15513	15498	15483	15468	15453	15438
16.60	15423	15408	15393	15378	15363	15349	15334	15319	15304	15289
16.70	15274	15259	15245	15230	15215	15200	15185	15171	15156	15141
16.80	15126	15112	15097	15082	15067	15053	15038	15023	15009	14994
16.90	14979	14964	14950	14935	14920	14906	14891	14877	14862	14847
17.00	14833	14818	14803	14789	14774	14760	14745	14730	14716	14701
17.10	14687	14672	14658	14643	14629	14614	14600	14585	14571	14556
17.20	14542	14527	14513	14498	14484	14469	14455	14440	14426	14412
17.30	14397	14383	14368	14354	14340	14325	14311	14296	14282	14268
17.40	14253	14239	14225	14210	14196	14182	14167	14153	14139	14125
17.50	14110	14096	14082	14067	14053	14039	14025	14011	13996	13982
17.60	13968	13954	13939	13925	13911	13897	13883	13869	13854	13840
17.70	13826	13812	13798	13784	13769	13755	13741	13727	13713	13699
17.80	13685	13671	13657	13643	13629	13615	13600	13586	13572	13558
17.90	13544	13530	13516	13502	13488	13474	13460	13446	13432	13418
18.00	13404	13391	13377	13363	13349	13335	13321	13307	13293	13279
18.10	13265	13251	13237	13224	13210	13196	13182	13168	13154	13140
18.20	13127	13113	13099	13085	13071	13058	13044	13030	13016	13002
18.30	12989	12975	12961	12947	12934	12920	12906	12892	12879	12865
18.40	12851	12837	12824	12810	12796	12783	12769	12755	12742	12728
18.50	12714	12701	12687	12673	12660	12646	12633	12619	12605	12592
18.60	12578	12565	12551	12537	12524	12510	12497	12483	12470	12456
18.70	12443	12429	12415	12402	12388	12375	12361	12348	12334	12321
18.80	12308	12294	12281	12267	12254	12240	12227	12213	12200	12186
18.90	12173	12160	12146	12133	12119	12106	12093	12079	12066	12053
19.00	12039	12026	12012	11999	11986	11972	11959	11946	11933	11919
19.10	11906	11893	11879	11866	11853	11839	11826	11813	11800	11786
19.20	11773	11760	11747	11733	11720	11707	11694	11681	11667	11654
19.30	11641	11628	11615	11601	11588	11575	11562	11549	11536	11522
19.40	11509	11496	11483	11470	11457	11444	11431	11418	11404	11391
19.50	11378	11365	11352	11339	11326	11313	11300	11287	11274	11261
19.60	11248	11235	11222	11209	11196	11183	11170	11157	11144	11131
19.70	11118	11105	11092	11079	11066	11053	11040	11027	11014	11001
19.80	10988	10975	10962	10950	10937	10924	10911	10898	10885	10872
19.90	10859	10846	10834	10821	10808	10795	10782	10769	10757	10744
20.00	10731	10718	10705	10692	10680	10667	10654	10641	10629	10616
20.10	10603	10590	10578	10565	10552	10539	10527	10514	10501	10488
20.20	10476	10463	10450	10438	10425	10412	10399	10387	10374	10361
20.30	10349	10336	10323	10311	10298	10286	10273	10260	10248	10235
20.40	10222	10210	10197	10185	10172	10159	10147	10134	10122	10109
20.50	10097	10084	10071	10059	10046	10034	10021	10009	9996	9984
20.60	9971	9959	9946	9934	9921	9909	9896	9884	9871	9859
20.70	9846	9834	9821	9809	9796	9784	9772	9759	9747	9734
20.80	9722	9709	9697	9685	9672	9660	9648	9635	9623	9610
20.90	9598	9586	9573	9561	9549	9536	9524	9512	9499	9487
21.00	9475	9462	9450	9438	9425	9413	9401	9388	9376	9364
21.10	9352	9339	9327	9315	9303	9290	9278	9266	9254	9241
21.20	9229	9217	9205	9192	9180	9168	9156	9144	9131	9119
21.30	9107	9095	9083	9071	9058	9046	9034	9022	9010	8998
21.40	8986	8973	8961	8949	8937	8925	8913	8901	8889	8877
21.50	8864	8852	8840	8828	8816	8804	8792	8780	8768	8756
21.60	8744	8732	8720	8708	8696	8684	8672	8660	8648	8636
21.70	8624	8612	8600	8588	8576	8564	8552	8540	8528	8516
21.80	8504	8492	8480	8468	8456	8444	8432	8420	8408	8397
21.90	8385	8373	8361	8349	8337	8325	8313	8301	8290	8278
22.00	8266	8254	8242	8230	8218	8207	8195	8183	8171	8159
22.10	8147	8136	8124	8112	8100	8088	8077	8065	8053	8041
22.20	8029	8018	8006	7994	7982	7971	7959	7947	7935	7924
22.30	7912	7900	7888	7877	7865	7853	7841	7829	7818	7806
22.40	7795	7783	7771	7760	7748	7736	7725	7713	7701	7690
22.50	7678	7666	7655	7643	7631	7620	7608	7597	7585	7573
22.60	7562	7550	7538	7527	7515	7504	7492	7481	7469	7457
22.70	7446	7434	7423	7411	7400	7388	7377	7365	7353	7342
22.80	7330	7319	7307	7296	7284	7273	7261	7250	7238	7227
22.90	7215	7204	7192	7181	7169	7158	7146	7135	7124	7112

## GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN INCHES OF MERCURY

P, in. Hg	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
23.00	7101	7089	7078	7066	7055	7044	7032	7021	7009	6998
23.10	6986	6975	6964	6952	6941	6929	6918	6907	6895	6884
23.20	6873	6861	6850	6839	6827	6816	6804	6793	6782	6770
23.30	6759	6748	6737	6725	6714	6703	6691	6680	6669	6657
23.40	6646	6635	6624	6612	6601	6590	6578	6567	6556	6545
23.50	6533	6522	6511	6500	6488	6477	6466	6455	6444	6432
23.60	6421	6410	6399	6388	6376	6365	6354	6343	6332	6320
23.70	6309	6298	6287	6276	6265	6253	6242	6231	6220	6209
23.80	6198	6187	6176	6164	6153	6142	6131	6120	6109	6098
23.90	6087	6076	6064	6053	6042	6031	6020	6009	5998	5987
24.00	5976	5965	5954	5943	5932	5921	5910	5899	5888	5877
24.10	5866	5855	5844	5832	5821	5810	5799	5788	5777	5767
24.20	5756	5745	5734	5723	5712	5701	5690	5679	5668	5657
24.30	5646	5635	5624	5613	5602	5591	5580	5569	5558	5548
24.40	5537	5526	5515	5504	5493	5482	5471	5460	5449	5439
24.50	5428	5417	5406	5395	5384	5373	5363	5352	5341	5330
24.60	5319	5308	5297	5287	5276	5265	5254	5243	5233	5222
24.70	5211	5200	5189	5179	5168	5157	5146	5135	5125	5114
24.80	5103	5092	5082	5071	5060	5049	5039	5028	5017	5006
24.90	4996	4985	4974	4963	4953	4942	4931	4921	4910	4899
25.00	4888	4878	4867	4856	4846	4835	4824	4814	4803	4792
25.10	4782	4771	4760	4750	4739	4728	4718	4707	4696	4686
25.20	4675	4665	4654	4643	4633	4622	4612	4601	4590	4580
25.30	4569	4559	4548	4537	4527	4516	4506	4495	4484	4474
25.40	4463	4453	4442	4432	4421	4411	4400	4390	4379	4368
25.50	4358	4347	4337	4326	4316	4305	4295	4284	4274	4263
25.60	4253	4242	4232	4221	4211	4200	4190	4179	4169	4159
25.70	4148	4138	4127	4117	4106	4096	4085	4075	4064	4054
25.80	4044	4033	4023	4012	4002	3992	3981	3971	3960	3950
25.90	3939	3929	3919	3908	3898	3888	3877	3867	3856	3846
26.00	3836	3825	3815	3805	3794	3784	3774	3763	3753	3743
26.10	3732	3722	3712	3701	3691	3681	3670	3660	3650	3639
26.20	3629	3619	3609	3598	3588	3578	3567	3557	3547	3537
26.30	3526	3516	3506	3495	3485	3475	3465	3454	3444	3434
26.40	3424	3414	3403	3393	3383	3373	3362	3352	3342	3332
26.50	3322	3311	3301	3291	3281	3271	3260	3250	3240	3230
26.60	3220	3210	3199	3189	3179	3169	3159	3149	3138	3128
26.70	3118	3108	3098	3088	3078	3067	3057	3047	3037	3027
26.80	3017	3007	2997	2987	2976	2966	2956	2946	2936	2926
26.90	2916	2906	2896	2886	2876	2866	2856	2845	2835	2825
27.00	2815	2805	2795	2785	2775	2765	2755	2745	2735	2725
27.10	2715	2705	2695	2685	2675	2665	2655	2645	2635	2625
27.20	2615	2605	2595	2585	2575	2565	2555	2545	2535	2525
27.30	2515	2505	2495	2485	2475	2465	2455	2445	2435	2426
27.40	2416	2406	2396	2386	2376	2366	2356	2346	2336	2326
27.50	2316	2307	2297	2287	2277	2267	2257	2247	2237	2227
27.60	2218	2208	2198	2188	2178	2168	2158	2149	2139	2129
27.70	2119	2109	2099	2089	2079	2069	2059	2049	2039	2030
27.80	2021	2011	2001	1991	1981	1972	1962	1952	1942	1932
27.90	1923	1913	1903	1893	1884	1874	1864	1854	1844	1835
28.00	1825	1815	1805	1796	1786	1776	1766	1757	1747	1737
28.10	1727	1718	1708	1698	1689	1679	1669	1659	1650	1640
28.20	1630	1621	1611	1601	1592	1582	1572	1562	1553	1543
28.30	1533	1524	1514	1504	1495	1485	1475	1466	1456	1446
28.40	1437	1427	1417	1408	1398	1389	1379	1369	1360	1350
28.50	1340	1331	1321	1312	1302	1292	1283	1273	1264	1254
28.60	1244	1235	1225	1216	1206	1196	1187	1177	1168	1158
28.70	1149	1139	1129	1120	1110	1101	1091	1082	1072	1063
28.80	1053	1044	1034	1024	1015	1005	996	986	977	967
28.90	958	948	939	929	920	910	901	891	882	872
29.00	863	853	844	834	825	815	806	796	787	778
29.10	768	759	749	740	730	721	711	702	693	683
29.20	674	664	655	645	636	627	617	608	598	589
29.30	579	570	561	551	542	532	523	514	504	495
29.40	486	476	467	457	448	439	429	420	411	401
29.50	392	382	373	364	354	345	336	326	317	308
29.60	298	289	280	270	261	252	242	233	224	215
29.70	205	196	187	177	168	159	149	140	131	122
29.80	112	103	94	84	75	66	57	47	38	29
29.90	20	10	1	-8	-17	-27	-36	-45	-54	-64
30.00	-73	-82	-91	-100	-110	-119	-128	-137	-147	-156
30.10	-173	-183	-193	-202	-211	-220	-229	-238	-248	-258
30.20	-257	-266	-275	-284	-294	-303	-312	-321	-330	-339
30.30	-348	-358	-367	-376	-385	-394	-403	-413	-422	-431
30.40	-440	-449	-458	-467	-476	-486	-495	-504	-513	-522
30.50	-531	-540	-549	-558	-568	-577	-586	-595	-604	-613
30.60	-622	-631	-640	-649	-658	-667	-676	-686	-695	-704
30.70	-713	-722	-731	-740	-749	-758	-767	-776	-785	-794
30.80	-803	-812	-821	-830	-839	-848	-857	-866	-875	-884
30.90	-893	-902	-911	-920	-929	-938	-947	-956	-965	-974
31.00	-983	-992	-1001	-1010	-1019	-1028	-1037	-1046	-1055	-1064
31.10	-1073	-1082	-1091	-1100	-1109	-1118	-1127	-1136	-1145	-1154
31.20	-1163	-1172	-1181	-1190	-1199	-1207	-1216	-1225	-1234	-1243
31.30	-1252	-1261	-1270	-1279	-1288	-1297	-1305	-1314	-1323	-1332
31.40	-1341	-1350	-1359	-1368	-1377	-1385	-1394	-1403	-1412	-1421
31.50	-1430	-1439	-1448	-1456	-1465	-1474	-1483	-1492	-1501	-1510
31.60	-1518	-1527	-1536	-1545	-1554	-1563	-1571	-1580	-1589	-1598
31.70	-1607	-1616	-1624	-1633	-1642	-1651	-1660	-1669	-1677	-1686
31.80	-1695	-1704	-1713	-1721	-1730	-1739	-1748	-1757	-1765	-1774
31.90	-1783	-1792	-1800	-1809	-1818	-1827	-1836	-1844	-1853	-1862
32.00	-1871	-1879	-1888	-1897	-1906	-1914	-1923	-1932	-1941	-1949
32.10	-1958	-1967	-1976	-1984	-1993	-2002	-2010	-2019	-2028	-2037
32.20	-2045	-2054	-2063	-2071	-2080	-2089	-2098	-2106	-2115	-2124
32.30	-2132	-2141	-2150	-2158	-2167	-2176	-2184	-2193	-2202	-2211
32.40	-2219	-2228	-2237	-2245	-2254	-2263	-2271	-2280	-2288	-2297
32.50	-2306	-2314	-2323	-2332	-2340	-2349	-2358	-2366	-2375	-2384
32.60	-2392	-2401	-2409	-2418	-2427	-2435	-2444	-2453	-2461	-2470
32.70	-2478	-2487	-2496	-2504	-2513	-2521	-2530	-2539	-2547	-2556
32.80	-2564	-2573	-2581	-2590	-2599	-2607	-2616	-2624	-2633	-2641
32.90	-2650	-2659	-2667	-2676	-2684	-2693	-2701	-2710	-2719	-2727

TABLE X - Concluded

GEOPOTENTIAL ALTITUDE IN FEET as a function of PRESSURE IN INCHES OF MERCURY

P, in. Hg	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
33.00	-2736	-2744	-2753	-2761	-2770	-2778	-2787	-2795	-2804	-2812
33.10	-2821	-2829	-2838	-2846	-2855	-2864	-2872	-2881	-2889	-2898
33.20	-2906	-2915	-2923	-2932	-2940	-2949	-2957	-2965	-2974	-2982
33.30	-2991	-2999	-3008	-3016	-3025	-3033	-3042	-3050	-3059	-3067
33.40	-3076	-3084	-3093	-3101	-3109	-3118	-3126	-3135	-3143	-3152
33.50	-3160	-3169	-3177	-3185	-3194	-3202	-3211	-3219	-3228	-3236
33.60	-3244	-3253	-3261	-3270	-3278	-3287	-3295	-3303	-3312	-3320
33.70	-3329	-3337	-3345	-3354	-3362	-3371	-3379	-3387	-3396	-3404
33.80	-3412	-3421	-3429	-3438	-3446	-3454	-3463	-3471	-3479	-3488
33.90	-3496	-3504	-3513	-3521	-3530	-3538	-3546	-3555	-3563	-3571
34.00	-3580	-3588	-3596	-3605	-3613	-3621	-3630	-3638	-3646	-3655
34.10	-3663	-3671	-3680	-3688	-3696	-3704	-3713	-3721	-3729	-3738
34.20	-3746	-3754	-3763	-3771	-3779	-3787	-3796	-3804	-3812	-3821
34.30	-3829	-3837	-3845	-3854	-3862	-3870	-3879	-3887	-3895	-3903
34.40	-3912	-3920	-3928	-3936	-3945	-3953	-3961	-3969	-3978	-3986
34.50	-3994	-4002	-4011	-4019	-4027	-4035	-4044	-4052	-4060	-4068
34.60	-4076	-4085	-4093	-4101	-4109	-4118	-4126	-4134	-4142	-4150
34.70	-4159	-4167	-4175	-4183	-4191	-4200	-4208	-4216	-4224	-4232
34.80	-4240	-4249	-4257	-4265	-4273	-4281	-4290	-4298	-4306	-4314
34.90	-4322	-4330	-4339	-4347	-4355	-4363	-4371	-4379	-4387	-4396

P, in. Hg	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
35.0	-4404	-4485	-4566	-4647	-4728	-4809	-4889	-4969	-5049	-5129
36.0	-5209	-5289	-5368	-5447	-5526	-5605	-5684	-5762	-5840	-5919
37.0	-5996	-6074	-6152	-6229	-6307	-6384	-6461	-6537	-6614	-6691
38.0	-6767	-6843	-6919	-6995	-7070	-7146	-7221	-7296	-7371	-7446
39.0	-7521	-7595	-7670	-7744	-7818	-7892	-7966	-8040	-8113	-8186
40.0	-8260	-8333	-8405	-8478	-8551	-8623	-8696	-8768	-8840	-8912
41.0	-8983	-9055	-9126	-9198	-9269	-9340	-9411	-9482	-9552	-9623
42.0	-9693	-9763	-9833	-9903	-9973	-10043	-10112	-10182	-10251	-10320
43.0	-10389	-10458	-10527	-10595	-10664	-10732	-10800	-10869	-10937	-11004
44.0	-11072	-11140	-11207	-11275	-11342	-11409	-11476	-11543	-11610	-11676
45.0	-11743	-11809	-11876	-11942	-12008	-12074	-12139	-12205	-12271	-12336
46.0	-12402	-12467	-12532	-12597	-12662	-12727	-12791	-12856	-12920	-12985
47.0	-13049	-13113	-13177	-13241	-13305	-13368	-13432	-13495	-13559	-13622
48.0	-13685	-13748	-13811	-13874	-13936	-13999	-14061	-14124	-14186	-14248
49.0	-14310	-14372	-14434	-14496	-14558	-14619	-14681	-14742	-14803	-14865
50.0	-14926	-14987	-15047	-15108	-15169	-15230	-15290	-15350	-15411	-15471
51.0	-15531	-15591	-15651	-15711	-15770	-15830	-15890	-15949	-16008	-16068
52.0	-16127	-16186	-16245	-16304	-16363	-16421	-16480			